ILLINOIS

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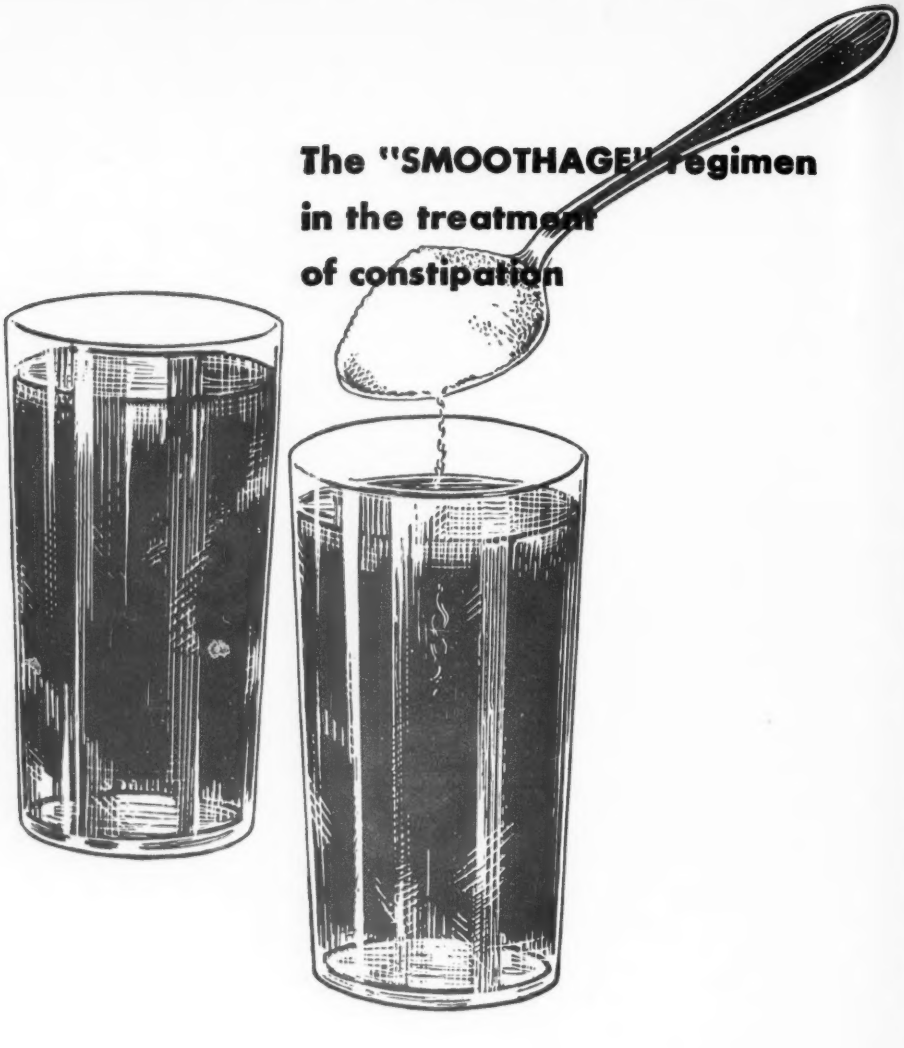

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RESEARCH IN THE SERVICE OF MEDICINE

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The Illinois Medical Journal

June, 1946

VOL. 89, NO. 6

Official Journal of the Illinois State Medical Society

EDITOR — Harold M. Camp. EDITORIAL BOARD — James H. Hutton, Chairman, Frederick H. Falls, Josiah J. Moore, Edwin M. Miller, Chauncey C. Maher, Harry S. Gradle, Harry Culver, Walter Stevenson, Raymond W. McNealy.

Editorials

MEET THE NEW OFFICERS

Robert S. Berghoff who has acted as President-elect of the Illinois State Medical Society for the past two years, was inducted into the office of President at the closing session of the House of Delegates on Thursday, May 16th. Everett P. Coleman, the retiring president, with appropriate statements, handed the gavel to Doctor Berghoff and after a short statement from the new president relative to his desire to carry on efficiently during the coming year, he closed the session of the House.

Doctor Berghoff was graduated from the St. Louis University Medical School in 1913, and served as intern at St. John's Hospital, St. Louis. For several years he devoted much time to the subject of tuberculosis, and had a number of important assignments as instructor in medicine and tuberculosis at Rush Medical College and as a staff member at Cook County Hospital. He was a Major in the medical corps during the first World War, and following his return from service, began his intensive training in cardiology, both in this country and in European centers. For a number of years he has been Clinical Professor of Medicine at Loyola University Medical School, Chief of Staff at Mercy Hospital, and through his efforts, the Heart Clinic at that hospital which has been operating over a period of years under his supervision, was established.

He has been a member of the Educational Committee of the Illinois State Medical Society, Chairman of the Scientific Service and the Post Graduate Committees for years, is always interested in these activities and has been largely responsible for their successful operation. In addition to his membership in the state society, Fellowship in the A.M.A., etc., he is certified by the American Board of Internal Medicine and is a member of the American Heart Association.

Irving H. Neece, Decatur, was chosen as President-elect by the House of Delegates. He also graduated from St. Louis University Medical School in 1911, and following his internship, prepared himself for the specialty of Urology, which type of work he has done during his years of practice in Decatur. For more than 20 years he has been a member of the Council of the Illinois State Medical Society from the Seventh District, and for one year, the chairman of the Council, which position he filled most satisfactorily.

Doctor Neece has been a member of a number of important committees both within the Council, and of those assigned for state wide work. He has always done his work as would be expected of one so interested in the problems of modern medicine. For a number of years he has been chairman of the Committee on Venereal Disease Control and has acted in an advisory capacity to the state division under the Department of Public Health, and has attended many conferences at the call of the Director or his personnel. Doctor Neece is well qualified for

the additional trust and responsibility which will go with this important office.

Chauncey C. Maher, who was elected first vice-president, was graduated from the University of Illinois in 1923, had an internship at Cook County Hospital 1923-25, and soon thereafter became a member of the staff of Cook County Hospital, and Associate Professor of Medicine at Northwestern University Medical School. He was certified by the American Board of Internal Medicine, Cardiovascular Disease, and his specialty has been Cardiology. He has been a member of the Illinois State Medical Society, a Fellow of the American Medical Association, and likewise is a member of a number of other special societies. Doctor Maher was General Chairman of the Committee on Arrangements for the 1945 annual meeting which was cancelled a year ago, and again acted in that capacity for our 1946 annual meeting. He held this position most creditably and carried out the policies which were approved by the Council, giving you this year a streamlined modern meeting appreciated by all in attendance.

John P. O'Neil, Chicago, was elected to the office of second Vice-President by the House of Delegates. Doctor O'Neil was graduated from the University of Illinois College of Medicine in 1906, and following his internship, prepared himself for the practice of Urology. He is a member of the American Urological Association in addition to holding membership in the Chicago Medical Society, the Illinois State Medical Society, and Fellowship in the American Medical Association.

The complete list of new officers, Councilors, and members of standing committees appears elsewhere in this issue of the Illinois Medical Journal.

A REPORT ON THE 1946 ANNUAL MEETING

The 1946 annual meeting of the Illinois State Medical Society held at the Palmer House, Chi-

ILLINOIS STATE MEDICAL SOCIETY

GENERAL OFFICERS, 1946-1947

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1ST VICE-PRESIDENT....Chauncey C. Maher, Chicago
2ND VICE-PRESIDENT.....John P. O'Neil, Chicago
SECRETARY-TREASURER...Harold M. Camp, Monmouth

THE COUNCIL

L. J. Hughes.....1st District, Elgin.....1947
Edgar C. Cook.....2nd District, Mendota.....1947
Percy E. Hopkins...3rd District, Chicago.....1947
Oscar Hawkinson...3rd District, Oak Park....1948
Harry M. Hedge....3rd District, Chicago.....1949
Wade C. Harker....3rd District, Chicago.....1947
Leo P. A. Sweeney..3rd District, Chicago.....1948
H. Prather Saunders.3rd District, Chicago.....1949
Charles P. Blair.....4th District, Monmouth....1949
Ralph P. Peairs.....5th District, Normal.....1949
Walter Stevenson....6th District, Quincy.....1948
Charles H. Hulick...7th District, Shelbyville...1949
Harlan English.....8th District, Danville.....1949
Charles O. Lane.....9th District, W. Frankfort.1948
G. C. Otrich.....10th District, Belleville.....1948
Edwin S. Hamilton.11th District, Kankakee....1947
Everett P. Coleman..At Large, Canton.....1949
Chairman of the Council.....Walter Stevenson

ILLINOIS MEDICAL JOURNAL

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Harry J. Stewart, Oak Park....Secretary, Journal Committee
James H. Hutton, Chicago.....Chairman, Editorial Board
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Editorial Office.....Monmouth, Illinois

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State Society will pay no bills for legal services except those contracted by the Committee. Notify the Chairman at once. Do not employ attorneys.

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cago, May 14-16, has come to a successful close. This meeting epitomized the accumulated wealth of two years in medicine. The 1945 annual meeting was cancelled by the Office of Defense Transportation, so consequently the officers, committees, and the general chairman appointed to carry on this meeting, held over and offered you a streamlined meeting conducted along new lines.

Comment is requested as to whether or not the attending physician prefers three days of general sessions with papers presented before the entire group by members of each section, or whether the return to section meetings is desired. It is hoped that many of the men who attended will write in to the secretary's office with suggestions for our 1947 meeting. As those who attended know, the Section on Radiology held a separate meeting on Tuesday afternoon, and the Section on Eye, Ear, Nose and Throat met all day Tuesday and Wednesday.

The registration this year indicated a statewide interest; 2856 professional registrations were recorded, 407 exhibitors and 358 members of the Women's Auxiliary and guests. The completed list of professional registrations is to be mimeographed and sent to all exhibitors who participated in the meeting.

Physicians from all over the world registered with us. Dr. T. C. Routley, secretary of the Canadian Medical Association, was present at the sessions Wednesday and was a guest at our annual dinner. Dr. Harrison H. Shoulders, President-elect of the American Medical Association, of Nashville, Tennessee, came in as a guest, attended some of the scientific sessions, met with our Council, and was seated at the speakers' table at our dinner. Three foreign registrations came to light as we checked the registration cards: one physician from Paris, France, another from Geneva, Switzerland, and the third from Lima, Peru, in all probability students in Chicago. Physicians from some ten or twelve other states also registered with us.

We wish to call your attention to the excellent work of Dr. John A. Mart, Chicago, in charge of the scientific exhibits for the first time this year. Doctor Mart gave an excellent account of himself, and the exhibits which appeared in the Red Lacquer Room were adjudged outstanding. This work will be carried on by Doctor Mart again next year, and we feel sure that these exhibits will develop into one of the outstanding features of our meetings under his capable leadership.

One of the reference committees appointed by the President, in reporting to the House of Delegates on the scientific work, highly commended both the technical and the scientific exhibits, and made pertinent recommendations for the arrangements for the 1947 meeting. These recommendations were approved by the House of Delegates and will be put into effect when arrangements are being made for the next annual meeting.

The 1946 annual meeting when judged by the usual standards, was veritably an outstanding meeting.

DR. H. PRATHER SAUNDERS JOINS AMERICAN COLLEGE OF SURGEONS STAFF AS ASSISTANT DIRECTOR

Dr. H. Prather Saunders joined the staff of the American College of Surgeons, Chicago, March 16, and was appointed Assistant Director.

Dr. Saunders was on active duty in the Medical Corps of the United States Navy from April, 1942, to March, 1946, during which time he spent 21 months in the Pacific as Senior Medical Officer of a destroyer tender which was equipped with a sick bay equivalent to a 60-bed hospital, furnishing surgical and medical service to its own crew and also the personnel of smaller ships such as destroyers and destroyer escorts.

Dr. Saunders was Secretary of the Chicago Medical Society in 1939 and 1940 and was President in 1942. He was First Vice-President of the Illinois State Medical Society in 1941. He has been a member of the attending surgical staff of Ravenswood Hospital since 1930 and was president of the staff in 1936 and chairman of the tumor clinic from 1937 to 1942. He was born in Kentucky, received an A.B. degree and a two-year Certificate in Medicine from the University of Missouri in 1917, and graduated with an M.D. degree from the University of Illinois in 1919, serving as instructor in physiology at the latter school simultaneously with an internship and residency at Lakeview Hospital from 1919 to 1921. He is a Fellow of the American College of Surgeons and a member of Phi Beta Phi and Alpha Omega Alpha. He was elected a councilor for the 3rd District, Illinois State Medical Society, at the recent annual meeting held May 14-16, 1946.

IN MEMORIAM

JAMES FULTON PERCY 1864-1946

James F. Percy, M.D., President of the Illinois State Medical Society in 1907, died in Los Angeles on April 26, 1946. Born in Bloomfield, New Jersey, Doctor Percy was graduated from Bellevue Hospital Medical College, New York, in 1886. For many years he practiced at Galesburg, Illinois, doing surgical work exclusively. He entered the medical corps of the U. S. Army in 1917, becoming Chief of Medical Staff, U. S. Army Base Hospital, Camp Kearney, where he remained on duty for two years. He later became a Lieutenant Colonel in the Medical Reserve Corps.

Soon after the end of World War I, Doctor Percy relocated in Los Angeles where he remained in practice until forced to retire because of failing health. He was a member of the first Council of the Illinois State Medical Society when the Constitution and By-Laws were completely rewritten in 1902-1903, remaining on the Council until elected as President-elect in 1906. For a number of years he was secretary of the Council, which position he filled most satisfactorily, and during this long period, he participated freely in the affairs of his state medical society.

Doctor Percy was a member of many surgical societies and was attending surgeon to a number of Los Angeles hospitals, being chief surgeon, cancer service, at the Los Angeles County Hospital. He was also president of a number of societies in Los Angeles including the Los Angeles Surgical Society, Los Angeles Cancer Society, and was past president of the Western Surgical Association.

During his long residence in the west, his interest in the Illinois State Medical Society never waned. He was a frequent visitor at the annual meetings. Many members of this society will long remember Doctor Percy for his outstanding work in cancer surgery as well as for his continued interest in the Society for which he had done so much over a period of nearly half a century.

1946-1947 OFFICERS OF THE ILLINOIS STATE MEDICAL SOCIETY

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President-Elect: Irving H. Neece, Decatur

1st Vice-President: Chauncey C. Maher, 6 North Michigan Ave., Chicago

2nd Vice-President: John P. O'Neil, 30 North Michigan Avenue, Chicago 2

Secretary-Treasurer: Harold M. Camp, Monmouth

THE COUNCIL

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Oscar Hawkinson, 1011 Lake Street, Oak Park

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Leo P. A. Sweeney, 9715 Winston Avenue, Chicago

H. Prather Saunders, 40 East Erie Street, Chicago

4th District: Charles P. Blair, Monmouth

5th District: Ralph P. Peairs, Normal

6th District: Walter Stevenson, Quincy

7th District: Charles H. Hulick, Shelbyville

8th District: Harlan English, Danville

9th District: Charles O. Lane, West Frankfort

10th District: G. C. Otrich, Belleville

11th District: E. S. Hamilton, Kankakee

Councilor-at-large

Everett P. Coleman, Canton

Chairman of the Council

Walter Stevenson, Quincy

Medical Economics

The Medical Economics Committee — Chauncey C. Maher, Chmn., 6 North Michigan Avenue, Chicago, Edwin S. Hamilton, V. Thomas Austin, Emmet B. Bay, Jay McDonald Milligan, Jacob M. Mora, George Halperin, Marie Wessels, Thomas C. Browning, Roland R. Cross, Milton E. Bitter, Edwin F. Hirsch, Ford Hick, Lt. Col. MC, William J. Bryan, John R. Vonachen.

THE DOCTOR AND CERTAIN RESPONSIBILITIES IN INDUSTRIAL MEDICINE AND SURGERY

The practice of the surgeon whose work is largely concerned with industry has as one of its requirements an orderly routine in handling reports and seemingly burdensome correspondence. It happens, however, that those engaged entirely in industrial work serve only a small portion of those who are injured at work or who suffer of occupational disease. The thousands of small industrial plants and other concerns who operate under the Compensation Act are the source of numerous accidents among workmen and in the case of some of these there is a notable prevalence of occupational diseases. Many of these patients are referred by the employer to general practitioners or specialists not engaged primarily in industrial work and it is among these groups that there may be a desire for a thorough understanding of the doctor's responsibilities in such work.

The responsibilities which will be referred to arise by virtue of enactment since 1914 of Workmens Compensation Acts by all of our states. These Acts are quite uniform in their essential features and all are modeled upon the English system much the same as our system of Common Law derived from that of the English. They embody three main aims: 1. To Prevent, 2. To Restore, 3. To Compensate. The first is largely an educational endeavor and a problem of both preventative medicine and engineering. The second is solely in the hands of the medical profession and as far as methods and application of treatment are concerned there need be no line of demarcation between the indications for treatment in industrial work than in any other comparable situation. The responsibilities of the medical profession in carrying out this second aim has been prompt and efficient and medical knowledge has contributed to the rapid strides in carrying out the first aim. Finally the third aim appears at first sight to be none of our concern but when examined further the need for a change of that viewpoint becomes obvious.

The compensatory function of the Compensation Act deals with the amount of compensation which should be paid for temporary and permanent disability, and for death benefits. No payment can be made in a routine manner for losses sustained until it has been certified by the treating doctor that a condition of occupational origin is suffered and that the patient is disabled. An accurate appraisal of this situation entails knowledge of various facts which in many cases are obtainable only from the doctor, and his report which to him may seem a nuisance, constitutes one of the chief essentials to making disability payments. It does not suffice to say that an index finger has been fractured. The history of the accident is essential and in that respect a claim adjuster must know - - where, when and how. Pre-existing ailments can be aggravated and activated and in those cases only information regarding the past history can clarify the element of responsibility. The exact nature and extent of the injury must be explained in order to qualify the patient for disability payments and as well the nature of treatment rendered must be sufficiently described to show compliance with the law, which requires that adequate and necessary medical care be rendered. Finally, some idea must be given in the preliminary report as

to whether or not there will be permanent disability in order that adequate reserves can be established for payment of the loss at a proper time. It is information of the nature just mentioned that is sought when the average type of surgeon's report blank is presented for execution and if the amount of necessary information be compared to the number of questions asked in the acceptable type of report form it can readily be concluded that these forms are not unnecessarily burdensome but that they are actually concise.

The task is not always complete when the patient has been given the necessary treatment and an initial report has been forwarded. Supplemental reports must often follow to advise of complications or to correct previous estimates of disability if the course of the condition has been other than at first expected. A final report is also required and although this too should be concise and simple, certain features must be included if the compensatory phase of the law is expected to function properly. The final report has as its essential elements the date when the temporary disability ceased and the nature and extent of permanent disability, if any. A study of the compensation acts will reveal that the information upon which decisions are made, referable to the extent of permanent disability must be provided by the medical profession. In the Illinois act there is no definite schedule which provides information as to the percentage of loss of a limb which has been injured in some specific degree or which lists certain conditions as being permanently disabling. The answers to these questions must be derived from the judgment and experience of the treating surgeon and medical examiners and if appraisals are to be correct an adequate amount of experience must be acquired and the necessary judgment exercised. Sources of information as to percentages of disability include texts on that subject, disability schedules of states in which unification of awards has been undertaken and finally by contact with examiners who have knowledge of prevalent practices in that field.

The responsibility of the doctor does not always end when his final estimate of disability has been given in writing. As we all know it may be necessary to present testimony before an industrial board or commission and if the law is to function properly this must be done willingly and with the greatest possible amount of accuracy.

The responsibilities here mentioned are largely inescapable and the fact that they are somewhat complex should bring to light the economic importance of the industrial portion of medical practice. On the side of the medical profession all of the responsibilities entailed should be assumed when treatment of any specific case is undertaken and on the side of industry and those who represent it there must be the realization that the doctor's task is often a burdensome one and that adequate compensation must be provided for the work performed outside of the operating and treatment rooms.

THOUSAND DOLLAR AWARD FOR MEDICAL STUDENTS

A competition open to undergraduate medical students, has recently been announced. Held annually to encourage medical students to acquire further knowledge of various fields of endocrinology, the subject of this year's thousand dollar prize contest will be, "The Role of Hormones in Sterility." Three judges, each prominent in the field of endocrinology, will make the selections, and the award is sponsored by Schering Corporation of Bloomfield, New Jersey, manufacturers of endocrine and pharmaceutical products for the medical profession. For the best thesis submitted on the subject, an award of five hundred dollars will be given. For the second and third best papers, awards of three hundred and two hundred dollars, respectively, will be given. The Schering Award Committee is again receiving an enthusiastic response from medical students in every section of the United States and Canada.

Correspondence

FIFTY YEAR CLUB LUNCHEON

The Fifty Year Club of the state medical society held its noonday luncheon in the Palmer House, Wednesday, May 15. The following physicians were present:

F. A. Turner, Rockford
Walter C. Blaine, Lincoln
Earl C. White, W. Brooklyn
Marion L. White, Dixon
Kate E. Peckhardt, Chicago
G. M. Blech, Chicago
W. M. Burroughs, St. Charles
U. G. Darling, Chicago
Edward H. Ochsner, Chicago
Ralph H. Wheeler, Chicago
Frederick Cleveland Test, Chicago
David Lieberthal, Chicago
Joseph Prendergast, Chicago
Joseph DeSilva, Rock Island
H. O. Munson, Rushville
V. A. Latham, Chicago
Edward D. Howland, Chicago
Gordon G. Burdick, Chicago
Isaac A. Abt, Chicago
James S. Mason, Urbana
Bertha Van Hoosen, Chicago
J. A. Brown, Kankakee
S. Horwitz, Peoria
Samuel E. Munson, Springfield
P. B. Kionka, Melrose Park
C. S. Bacon, Chicago
E. Luther Stevens, Bartlett
Walter B. Metcalf, Chicago
W. R. Roberts, Cissna
Berton W. Hole, Springfield
George Allen Dicus, Streator
A. M. Barothy, Chicago
Victor A. McClanahan, Aledo
Alvin V. Cole, Chicago
Walter C. Blaine, Tuscola
George Cremeens, Springerton
Perry H. Stoops, Chicago
Elizabeth R. Miner, Macomb
Earl Beck, Chicago
Effie L. Lobdell, Chicago
S. C. Stanton, Chicago

Several members delivered short addresses or told some humorous story, and the meeting was thoroughly enjoyed by all present. We were also honored by having Dr. H. H. Shoulders, president elect of the American Medical Association, for a short visit and an interesting address. A splendid dinner was served, for which I am instructed to express our thanks to the Illinois State Medical Society.

Signed: Andy Hall, M. D.
Chairman

NEUROPSYCHIATRY TRAINING OFFERED

The Department of Public Welfare, State of Illinois, offers a one, two and three year training as residents in neuropsychiatry and its allied fields. The course is designed to fulfill the requirements of the American Psychiatric Association and to prepare the resident for examination to become a diplomate of the American Board of Psychiatry and Neurology. The regular positions in the state hospitals will be filled from the graduates of this course whenever possible.

The outstanding features of these residencies will be the nine months training in one of the approved state hospitals and the three months training in the Illinois Neuropsychiatric Institute in cooperation with all the class A medical schools in Chicago. Another outstanding feature will be service at the Veterans' Rehabilitation Center, the Psychopathic Hospital of Cook

(Continued on page 280)

State Department of Public Health

SANITARY ENGINEERING — AN ALLY OF MEDICINE

Sanitary engineering, a subject that involves technical information and procedures far afield from that of medicine, is, nevertheless, one of our most important factors in the control of many communicable diseases. The physician may see a case of typhoid fever, dysentery, scarlet fever, diphtheria, undulant fever or, less commonly, malaria or plague. He is concerned primarily with the treatment of that individual case and the protection of other members of the family. The sanitary engineer on the other hand is interested in the origin of that infection. Was it due to contaminated water, milk or food? Were insect vectors or intermediate hosts involved? What does that case imply with regard to sanitation and its effect upon the community? The answers to these questions are of utmost importance for in many instances the occurrence of even one case may mean that the health of the entire community is at stake and not uncommonly it is the technical skill of the sanitary engineer, not the physician, that will prevent the extensive repetition of that one case.

The interests of sanitary engineering, of course, are not confined to the relation of sanitation to the individual already infected. It is true that a case of typhoid often calls for immediate correction of sanitary defects. This is an unfortunate circumstance which should not have occurred and *that* principally is the aim of sanitary engineering — the constant promotion of good sanitation which will provide a healthful total environment in rural as well as urban areas, at play as well as at home and work. This alone, with all due respect to preventive medical procedures and other public health practices, will do much to reduce the prevalence of diseases due to filth and insects. Mosquito and other insect control, deratization, milk pasteurization, proper sewage disposal, safe water supply are but a few examples of sanitary engineering procedures which play a major role in disease control. As to evaluating results, we have only to compare the present and past in terms of a few diseases: yellow fever, malaria, plague, typhoid fever and cholera. The present success in the conquest of each has been largely a matter of good sanitation.

The Illinois State Board of Health, created in 1877, early recognized the importance of sanitation particularly with respect to stream pollution. This responsibility was shared with other State agencies such as the University of Illinois or was fulfilled with the temporary assistance of other outside individuals or agencies. It was not until 1915 that the need of a full-time Bureau of Sanitary Engineering became so apparent that the legislature appropriated funds for its establishment under the State Board of Health. Provision was made for a chief engineer, and assistant engineer for field studies, an assistant engineer for the water and sewage laboratory and a stenographer. Thus with a staff of three engineers and one stenographer, Illinois began a long needed systematic sanitary engineering program.

Today that Bureau, now known as the Division of Sanitary Engineering, is one of the most active and largest Divisions of the State Department of Public Health. Since 1915 its personnel has increased from a total of four to a staff of

14 engineers, 6 milk sanitarians, 1 nurse, 12 laboratory workers, 1 chemist, 2 special investigators and 13 clerical workers. In addition, 8 sanitary engineers and 2 sanitarians are assigned to district offices of the Department.

The development of the present staff has been a gradual process occasioned by the perfection of new procedures, advancing scientific knowledge, added responsibilities as well as an increasing number of requests for services and advice. While at the very first water supplies, sewage disposal and stream pollution were the major interests of the Bureau, the program today includes other phases of sanitation which are of equal importance as safeguards in modern living.

Many of these activities are carried on in cooperation with other Divisions of the Department as well as with official local health organizations. In nearly all instances, however, the major responsibility belongs to the Division of Sanitary Engineering.

Among its chief interests, the Division investigates and approves proposed new or improved public water supply systems. Preliminary inspection of plans and final approval following construction before operation begins are important items in the program. Existing public supplies are constantly checked by plant visits and laboratory procedures in order to insure the maintenance of safe operation. The Division sponsors annual conferences and cooperates with the University of Illinois in offering yearly short courses for the operators of water plants. Thus the guardians of our water supplies are informed of new and more efficient developments in plant operation.

Inspection of water supplies for common carriers, approval of private supplies in F.H.A-financed homes, inspection of school wells and cisterns and advice to commercial companies and home owners concerning the construction of private wells are additional functions of the Division which help materially to accomplish safe water supplies throughout the State.

Closely related to water supply is the matter of sewage disposal. The activities of the Division with respect to public and private sewage disposal systems parallels the program described for water supplies. As to stream pollution created by the disposal of sewage as well as industrial wastes into surface waters, the Division renders all technical services for the State Sanitary Water Board which is composed of the Directors of the State Departments of Public Health, Agriculture and Public Works and Buildings, and a representative of manufacturing interests appointed by the Governor. The Chief Sanitary Engineer serves as technical secretary to the Board. The purpose of this Board generally is to investigate, devise ways and means of controlling and to enforce the prevention of any stream pollution that is detrimental to public health, or to the health of animals, fish or aquatic life or detrimental to the practicable use of waters for recreational purposes.

Milk, the safety of which is equal in importance to that of water, is the basis of another extensive activity of the Division. The inspection and approval of milk pasteurization plants and the enforcement of the Illinois State Grade A Law are two of its legal responsibilities. While the correction of defects is made mandatory, prior to issuance of necessary certificates to dairies and pasteurization plants, much of the accomplishments are achieved through the educational program directed toward the owners and operators during inspection visits. In this field reliance is placed on laboratory analyses of milk and milk products as well as upon the actual findings in the plants during operation.

The licensing of maternity hospitals is the direct responsibility of the Division of Maternal and Child Hygiene but to the Division of Sanitary Engineering there has been assigned the repsonsibility of inspecting sanitary installations in these hospitals and of reviewing plans and specifications with regard to new installations. A closely related activity, the licensing of nursing homes which is based largely on sanitation requirements, is a more direct function of the latter Division involving the review of applications and numerous inspections.

Although malaria is not widely prevalent in Illinois, a constant threat exists because of the presence of Anopheline mosquitoes in many of our waters. During the war the Division assisted the U. S. Public Health Service in a mosquito control program and in all probability the Division will continue to promote this program and give advisory service to district proj-

. ects made possible by the State's Mosquito Abatement Law.

In addition to its year-round programs, the Division stands in readiness to fulfill its responsibilities as outlined in the State *Disaster and Emergency Plan* prepared by the State Military and Naval Department in 1944. The serious health hazards created by floods and tornadoes require well trained personnel and technical equipment in order to restore safe water supplies and provide proper sewage disposal and housing as quickly as possible. These functions belong primarily to the Division's engineers.

Although the multiplicity of the foregoing duties would seem to be enough for one Division, they do not represent all of them. The investigation of water-borne diseases and food poisoning outbreaks, supervision of swimming pools and bathing places, sanitary inspection of schools and State institutions, inspection of inns and boarding houses, investigation of insecticides and bactericides, the promotion of general sanitation in homes and communities, advice as to garbage disposal systems, eradication of rats, insect control, sanitary barn construction, food sanitation, municipal ordinances — all of these are included in the general program of the Division. Much of the educational work is accomplished through personal contact made by members of the Division or its field representatives but liberal use is made also of pamphlets, films and exhibits dealing with the technical as well as general aspects of sanitation.

It can be seen, therefore, that the doctor and the sanitary engineer share much in common as to an interest in the cause and spread of many of our communicable diseases. From this common foundation the one pursues the study of anatomy, physiology, symptoms and treatment while the other becomes involved with mathematics, physics and structural design. But given a communicable disease in which the cause is traced to poor sanitary facilities, the interests of both once more converge in an effort to protect the health of the community as well as the individual. In this respect the sanitary engineer is closely allied to the doctor of medicine.

TUBERCULOSIS TAKES 315,000 LIVES IN FRANCE DURING WAR YEARS

The Paris correspondant of *The Journal of the American Medical Association* reports in its March 23 issue that there were 315,000 deaths from tuberculosis in France during the war period, September 1939 to May 1945.

The correspondent, who derived his figures from the Bulletin of General Statistics of France, says:

Children up to 2 years of age were severely stricken. An increase of 21 per cent for adolescents from 15 to 19 and 88.5 per cent for men from 25 to 29 has been observed. The author [of the Bulletin] concludes that this increase among men is due to their greater reaction to the restrictions and the hardships of life during the war and the occupation.

Continuing, *The Journal* correspondent presents a comparative study of the tuberculosis mortality in the past two wars:

During the war of 1914-1918 an increase of the tuberculosis death rate was noted. The death rate rose from 215 per hundred thousand inhabitants in 1910 to 278 in 1918, an increase of 29.3 per cent. During the war of 1939-1945 and the occupation it attained 159 in 1941, the highest rate, as against 120 in 1936, which represents an increase of 32.5 per cent.

The practicing physician will do well to request routine laboratory examinations of the sputum of each of his patients with pulmonary symptoms. A number of these persons will be found to have tuberculosis. Most states provide free laboratory service for such tests. Herman E. Hilleboe, M.D. and Arthur W. Newitt, M.D. Jour.-Lancet, April, 1945.

Original Articles

PRESIDENT'S ADDRESS

EVERETT P. COLEMAN, M.D.
CANTON

We are living in a changing world. Progress in scientific medicine has advanced so rapidly in the past few years that it taxes the ingenuity of the trained scientific mind to keep abreast of it. In the same manner legislative and other affairs are also changing, so that the medical profession is having to protect itself on so many fronts that again the scientific doctor, accustomed to thinking only in terms of treating his patient, hardly knows which way to turn to defend himself.

A presidential address at this type of meeting is, in a sense, an accounting of stewardship, a report to you of ideas formulated during the past two years. A very few years ago your former presidents have given scientific papers on this occasion, containing their ideas along lines of scientific medicine which were instructive and which many times marked important advances in the science of medicine. Of more recent years these addresses have been based on legislative problems with which we were faced, and suggestions with reference to what might be done to overcome threats to the practice of medicine. All these have had an optimistic viewpoint.

On this occasion, were we living in normal times, we too should have an optimistic outlook and there are many reasons why this should be. For example, our country has just won the greatest war in the history of mankind. Our victorious armies are rapidly being disbanded. The country should, under normal circumstances, be returning to a period of post-war prosperity and the inhabitants should be in a position to enjoy more comforts and more happiness than they have had heretofore. Our returning medical veterans are coming back to their practices with their knowledge enhanced by great scientific advances in the past two years, especially along the line of chemical and biologic medicine. For example, there is the selective study of physiology. It is now known that radio-active iodine can be introduced into the circulation and will lodge in the thyroid gland, permitting a better and more thorough study of the function of that organ. This same method of studying physiology shows the possibility of adding to our information in reference to all the other organs of the body. Corresponding medical and surgical advances have been obtained, and there are prospects of more. Infections are being overcome. The recent advances of surgery in reference to radical resections of stomach and pancreas for cancer, is opening a new prospect for those interested in that type of work. Penetrating wounds of the eye are said to no longer require a loss of vision of that eye, or the loss of the eye itself, which I am told has been a routine procedure up until the last two or three years. With these, and many other examples in mind, a summation of the last two years of progress and the anticipation of things to come should bring an outlook of optimism. It should be based on the prospect of increasing length of life and health for the citizens of this country and of decreasing their illness, and an outlook of added happiness, which we know the medical profession alone is able to give the public in increasing volume. Instead of these things an attitude of caution seems indicated, based on the fact that civilization which has been built up by the efforts of comparatively few, who then carried the masses to vistas beyond their capacity to imagine or appreciate, may be voted down; it may even be lost by the ballot, which was

As read at the General Session of the Illinois State Medical Society, Wednesday, May 15, 1946, in Chicago.

originally used to free mankind.

Europe for generations has developed a spirit of aggressiveness and fostered the development of armies and national hatred. The result has been wars which now have practically wrecked civilization as it existed there. In the United States a spirit of internationalism has appeared with a tendency to foster class hatred until, with an impending return to the draft and to rationing, we well may be on the road to a governmental controlled economy, in which the individual may lose his identity until step by step we return to a life of regimentation which we have seen in Fascist Italy, Nazi Germany, and Soviet Russia. To a condition which, while necessary in the Army and Navy, has brought about so much resentment of that type of life among our returning veterans, that the system of voluntary enlistment seems to have fallen down almost entirely. This is due to the fact that our young men are only too anxious to get away from the regimentation which our present bureaucratic politicians are attempting to force upon the entire nation. Races which have lived in serfdom and semi-slavery for years may find that for themselves regimentation is a step forward; for the citizens of this country, however, it is a long journey backward and what will be lost under these conditions may well require generations to regain. The medical advances of this country have practically overcome and almost wiped out a great number of the major infections: tuberculosis, lues, typhoid fever, and many others. More recently traumatic surgery has taken a tremendous step forward due to its remarkably effective use in the hands of our military surgeons in the war. The treatment of peritonitis, hemorrhage, and shock has improved, and many surgical conditions which until recently caused death or permanent disability have responded to newer surgical methods. Such conditions as appendicitis, diseases of the thyroid gland, of the stomach, the gallbladder, the genitourinary organs, have been managed so well that persons suffering from these dread ailments are relatively safe when treated in the hands of the skilled American doctor of medicine.

Increased length of life brings the penalty of added afflictions and therefore old-age has been termed the most dreadful disease of all, but even the afflictions due to advancing years have been lightened by medical science. For example, great progress has been made in recent years in the treatment of fracture of the hip, and in prostatic disease, two of the commoner disabling conditions of the aged.

With all our accomplishments, we still have much to gain, new worlds to conquer. Although heart disease leads all others as the cause of death, perhaps a very potent factor in the production of the sclerotic arteries which tend to produce much of it, is that other prevalent disorder, chronic arthritis. These conditions added to cancer are now our major medical problems. The task is not simple and its solution needs the minds of the best medical men we can obtain. If we are to solve these problems we must as a profession be free to study, to learn, and to accomplish gains such as those which solved the problems of diphtheria, smallpox, and tuberculosis.

When we consider the troubles of the business or economic world and see how it is threatened by ill-advised attacks from politicians and ambitious agitators, and when we see the same agitators looking upon medicine with an envious eye, we must give thought to what might occur if their plans should succeed. We must think of what medicine is now doing, and what it will be able to accomplish in the next decade if allowed to carry on at its normal rate of progress, and then what medical stagnation would mean instead. We have as a profession several objectives. One is the care of the sick and here we have seen medical care develop until it is so complete and so readily available in this country that the public takes it for granted. The public here expects and receives a grade of medical care and a type of personal attention not available elsewhere in the world. Throughout this country any citizen is able to consult a doctor of medicine, is able to be hospitalized, and to receive scientific care from medical men who are interested in his welfare. He has a better chance of being restored to health than in any other country. All this at a price which compared to autos, furnaces, and house repairs, is comparatively cheap. In our care of the sick we have done a marvelous job. We have also developed along economic lines. In any form of society there are those who through inability to plan ahead or make provision for their future care, need in times of distress, help from the more prosperous members of their communities. Re-

gardless of their financial status those who are unable to care for themselves in the State of Illinois are assured of good medical care as shown by the amount spent for this purpose, by the Supervisors in their care of the indigent, the Old Age Pension System as applied under the control of the Illinois Public Aid Commission and with the assistance and advice of the Illinois State Medical Society. Those who receive Blind and Widow's pensions, and those who receive Aid to Dependent Children. In addition we have some very excellent laws which take care of industrial injuries and unemployment. Many of these are efficient and satisfactory in relieving the needs of the indigent or the substandard groups in every community. They are well worthwhile projects, and they are doing a great deal of good. Because these are serving a useful purpose, and because they are subject to some interesting political complications we now have government bureaus in Washington showing a desire to pension everyone, at least from a medical angle. The medical profession is not reactionary. To anyone who has given thought to the rapidly changing pace of advancing medical knowledge it is evident that the modern doctor has to be progressive. From the economic angle he is interested in Voluntary Prepayment Insurance Plans as advocated by the American Medical Association, and as now being introduced by your State Society. He is interested in furthering needed and proper health legislation, which will secure more hospital beds, and legislation which is intended to protect the workman against lost time due to sickness, as well as unemployment. He is interested in any measure which protects the individual against truly catastrophic illness. We as medical men feel that we are competent to care for the sick, and that our methods of insurance for medical care will be managed far better and more in the public interest than anything managed politically from Washington. The repeated and flagrant examples of Bureaucratic inefficiency with which we are familiar, gives us confidence that we surely can do a better job.

We are interested in a constant sponsoring of scientific medical progress. In the correlation of accumulated experiences as demonstrated in medical journals and in such meetings as this. We are interested in giving the younger men an opportunity for increased scientific progress so as to increase their ability to serve the public. We are interested in having time and opportunity for study and to crystalize our ideas when we review the results of the past day's work. By this means we hope to overcome the diseases just mentioned, which are the greatest menace to the health of our citizens at the present time.

If the Washington plan for the regimentation of our profession should succeed, it may start out conservatively to gain as many supporters as possible, but in a short time will inevitably lead to the following objectionable features. First, domination by lay people, such as social service workers who have enthusiasm and energy but with little medical knowledge. For example, in the Illinois Emergency Relief Commission, where regulations were made permitting the doctors to make only one or two visits to patients with Scarlet Fever; where it was ruled that no obstetrical cases should be taken to the hospital on government funds, and no permission given to treat the unfortunate on relief if the local officer did not happen to believe that there was such a thing as illness. As you know there are some who question that. Second, there will be a free dispensary type of service to the public, such as in Germany where prior to the war, the ear, nose and throat man was expected to treat 100 patients a day, in addition to his private patients; pediatricians 100 to 120 a day, and a general practitioner 60 to 80, in addition to private patients. There will be no chance to progress professionally or financially. There will be endless governmental reports to be filed, no time for constructive thought or study, and no time to organize mentally and to assimilate the results of the day's work. And, as you all know these last factors are of vital importance. If we cannot give thought to what we have done during the day, do not have time to analyze our problems, we will tend to deteriorate and the public will receive a much poorer grade of medical care.

Since we are confronted by these problems let us give thought as to how these plans to regulate medicine, and ultimately the entire public, are introduced. They are put over by a long and devious method of propaganda, of quoting false statistics, in which the Department of Social Security has specialized in recent years. Sta-

tistics which are falsified. For instance, it is possible to take the infant mortality in some European city, to take a comfortably situated section of that city with a good mortality rate and in order to compare it with a city in the United States with a slum population, pick out the worst ward in that latter city and use its figures as being typical of the entire state and then compare the two. Or, to take a sub-standard negro community, one of the few remaining black marks in our health record, quote its figures on infant mortality as being typical of the entire United States, and then to compare those figures unfavorably with some European country. Then to use that statement to the effect that we as a nation are far down the list in infant mortality. This statement is also applied to maternal mortality and the mortality of adolescents and adults, but those of you who have been in Europe and have seen the conditions of poverty and squalor under which a great many of these inhabitants live, you who have seen the slum districts in London, in Naples, in Alexandria, and have seen the moral degradation and filthy living conditions of Paris, you know that while in our country many things are not ideal they are still so far in advance of anything European that figures tending to prove those individuals are healthier, and have less sickness than we, are definitely based on erroneous statements. Furthermore, in these alleged statistics no comparison is made between cities of comparative population and climate.

Another propaganda point is the statement that the draft with forty per cent rejections of our young men is a reflection on our medical care. It is more of a reflection on the qualifications which our Army enforced rather than the condition of the people who were examined. In addition to illiteracy, there are several reasons for that forty per cent rejection. First of all, the high physical standards of the U. S. Army, higher by far than those of any foreign country. The fact that many were rejected because of non-preventable diseases such as, myopia and psychoneurosis, which are hereditary. Unless we are permitted to go into the field of eugenics and have a governmental enforced system of birth control we will never be able to overcome this hereditary angle.

We now have figures available here which show the real facts, which indicate beyond doubt that our country is by far the healthiest and has the best mortality and morbidity record of any country in the world. Our traducers in Washington speak gloatingly of the fact that other countries, in Europe particularly, have a lower maternal mortality rate than we have here. They fail to state that the pregnant woman in this country dying of heart disease or automobile accident is listed as a maternal death here, but not in the other countries which they seem to admire so much. They also fail to call attention to the fact that while the Swedes in Sweden have a very good maternal mortality rate, the Swedes in Minnesota have a still better one. Facts of this type are not called to the public attention.

What can we as a profession do to counteract this propaganda? How can we protect our own interests and particularly those of the otherwise defenseless public? I think there are several satisfactory answers to this question. First of all, we can continue the good work that we are doing as a medical organization. This is our present bulwark against attack, the work at home by State Societies. For example, in the past 20 years our State Society has been contacting the public through meeting with the various service organizations and clubs, through the press, and sometimes by radio, telling the public of the accomplishments of scientific medicine, telling them of the things that organized medicine has been doing for their welfare. This has been a real accomplishment and on the basis of it we have made many friends throughout the state, we have many friends in legislative fields, and we have more in the grass roots of the country. We must continue this method of making friends and letting the public know what we are aiming to do, how our intentions are based on aiding their welfare. We must do it by contacting various organizations that represent the public. We can do it in a very efficient and thorough way through our State and County Medical Societies. The major national problems perhaps can be attacked by the American Medical Association and the National Physician's Committee but the real ground-work done at home must be through our State and County Societies. Through them we must have closer contact and cooperation with druggists and dentists, with the lawyers who in many respects have as many troubles and as many threats as we have, and particularly in the middlewest sec-

tion we must have closer and better contact with farmers and farm organizations. It is highly important that we realize their problems and that we get together with them so that they will also realize ours. By such contacts we can gradually and successfully overcome any shortage of physicians in rural areas, for we have a mutual interest with the farmers as they have with us.

In addition we must continue our Public Relations Department, both in the State Society and in the National organizations, and our representatives in the Public Relations Department must be used to sell organized medicine to the general public by all means available. This has been done in the past as I have just stated. We have taken an active part and accomplished much and we must now extend our efforts further by contacts through the press, radio and by public addresses. Our new plan in the Public Relations Committee of the State Society holds great promise of making more direct and worthwhile contacts in the future. Furthermore, we must aid the economic side of medicine by cooperation with one or more types of prepayment insurance, and perhaps a choice of two or three types may be advisable. We must have closer cooperation among ourselves. We cannot afford to let personalities interfere with the needs of the profession. A united sentiment among the medical profession is essential. We must continue to improve medical science and practice for by best serving the public interests we best serve ourselves. Our problems are many and our responsibilities are great but despite the threatening clouds of stifling bureaucratic oppression I feel that the profession which in a few short years produced a Lister, an Osler, a Crile, and a Mayo, a profession which has taken the plagues of yesterday and turned them into memories, will also be able to overcome its problems of misguided bureaucratic legislation as well as to advance further against the ramparts of cancer, heart disease, and the other perils of mankind. With a united medical group we can accomplish in the coming generation as we have in the past, things that make miracles seem commonplace. Our hope is that with a free and untrammeled profession we can raise the health and happiness of our American citizens to a level once thought to exist only in the dreams of the poets.

FUNCTIONAL DISEASE VS. ABDOMINAL SURGERY

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No field of medicine is free of the influence of functional disease. The surgeon must recognize functional disease and avoid errors of diagnosis and treatment. Operations may be performed without benefit to the patient or even with aggravation of symptoms owing to failure to recognize functional disease as the causative factor. Functional disease relates to disturbances in the function of the organ in contradistinction to organic disease which relates to pathologic states in the organ per se.

Chronic nervous exhaustion.—This discussion is confined to functional disease arising out of a chronic nervous exhaustion, giving rise to abdominal symtoms owing to irritability of the gastro-intestional tract and to related causes. Functional disease is the great mimic of organic disease. Close attention to all factors in a detailed history and examination and their balanced consideration are required to avoid errors in diagnosis. The abdominal and pelvic surgeon must constantly be aware of functional disease and exclude it before advising an operation.

Pathogenesis of chronic nervous exhaustion.—There is, of course, no demonstrable pathology in Chronic Nervous Exhaustion. The background and development of a chronic nervous exhaustion is of interest. One learns to recognize the type of individual most susceptible to a chronic nervous exhaustion. One can often elicit a history of functional disease in other members of the family group.

The individuals who may develop chronic nervous exhaustion are quite frequently ambitious, producers, and dependable. These are laudatory principles and adherence to them produces successful persons. In the pursuit of these principles, however, some individuals become perfectionists. The housewife can tolerate no dust, each chair has its place; the executive clears each report in full on time, studied to the minutest detail; the factory worker strives to reach a higher level of production. Often these individuals are intolerant of less than perfection in others as well. The housewife is irritated by a cigarette ash on a table; the executive will not tolerate delay or inefficiency in others; the

factory worker seeks upgrading ahead of schedule, and less than adherance to this program is intolerable. These individuals rarely relax. They have given up most of their usual entertainment and often appear to have lost their sense of humor.

Chronic nervous exhaustion may also develop in the so-called average individual when he is subjected to excessive work, responsibility or emotional disturbances.

This is the background for the development of a chronic nervous exhaustion. If each day the housewife, the executive, or worker, can escape completely from his goal, relax and restore his nervous system, a chronic nervous exhaustion does not develop. If, instead, worry, i.e. purposeless mental activity, or sustained mental overactivity is indulged in excessively, the restorative period is inadequate and a residual exhaustion is present at the start of the next day. A progressive nervous system depletion then develops to a clinically evident chronic nervous exhaustion. The incidence of chronic nervous exhaustion increased markedly during the war years. It was to be expected. Relatives in combat areas, persons dislocated from normal family life given responsibilities new to them, executives facing constantly new emergencies, workers forced to longer hours without vacation; all this gave rise to inevitable worries and sustained mental overactivity. Nervous system exhaustion followed and clinical chronic nervous exhaustion developed in many. The surgeon must be aware of this fact or many individuals will be subjected to unnecessary surgical intervention.

Symptoms of chronic nervous exhaustion.— Patients with chronic nervous exhaustion present the same basic symptoms, regardless of the individual causative factors, and these symptoms are quite real to them. The symptom pattern is just as definite and recognizable as symptom patterns of whooping cough, diabetes, or appendicitis. The patient usually has a preconceived suspicion that he has some particular organic disease. Chronic appendicitis, ulcers of the stomach or colon, gall-bladder disease, cancer, adhesions, pelvic infection, and cysts of the ovaries are most frequently mentioned. The patient often apologetically states he cannot clearly describe his symptoms. This fact is so frequently noted that it is of value in suggesting functional disease.

The most frequent complaint is pain. The pain is described as dull aching in character, occasionally sharper, and is not constant. It is commonly noted in more than one quadrant of the abdomen, but may be constantly related to one quadrant, usually the right or left lower. The pain is often aggravated by eating and relieved by a bowel passage. The patient may state that he notices the pain only when tired or under undue strain or tension, and that it is relieved by rest. Minimal tenderness in the area of the pain is noted frequently. Bloating, gas and selective food dyspepsia are reported.

The patient complains of being easily irritated. Poor concentration power, such as re-reading a passage, or the inability to complete a magazine story, is reported. He complains of being more tired on arising than on retiring, even though he slept well. A weight loss is frequently reported and this is usually explained by an associated loss of appetite.

On direct questioning, the examiner obtains a history of irritability, nervousness and worry. He may find that the symptoms vary directly with disturbing circumstances or sustained mental over-activity, and in the absence of these irritants the patient feels better. The onset of symptoms frequently follows changes in environment, work, or habits of the patient. The patient usually is unaware of this correlation until it is developed by direct questioning.

Physical examination reveals a tense, often exhausted appearing individual. The age group varies from the high-school student to patients over 60 years of age. Abdominal examination usually reveals slight tenderness in the area of the described pain. It is no more marked on deep than on superficial palpation. There is no rigidity. A tender palpable spastic sigmoid colon is commonly noted.

Scars of previous operations for the relief of the pain are frequently found. Patients tell of appendectomies, not emergent, performed for relief of their pain, without success. They ascribe the continued original pain to adhesions. Cholecystectomies performed for relief of bloating, gas and pain, in the absence of stones and with persistence of distress are reported. Opera-

tions to divide adhesions of previous operations are recorded with failure again reported.

Examination of the pelvis frequently reveals a moderately tender, freely movable normal uterus, or quite tender adnexal regions without palpable masses. Low midline abdominal scars of pelvic operations, without relief of pain, are common.

A few of these patients feel it necessary to continue this vicious cycle of operations for the relief of symptoms previous operations failed to give. They failed because organic pathology was not the exciting factor.

The chronic nervous exhausted patient, therefore, is a tense, serious, worried man or woman of any adult age who earnestly presents symptoms of a rather typical pattern. He has intermittent dull aching adominal pain, is nervous, eats and sleeps rather poorly, and is more tired in the morning than on retiring. He admits that there are times he feels good, and he may or may not correlate this with the escape from known nervous system irritants. The history may reveal environmental changes preceding the onset of symptoms.

Differential diagnosis.—In this paper we are concerned with the differential diagnosis of certain abdominal and pelvic surgical diseases giving rise to pain. If the history and physical findings have been closely interpreted, and the surgeon is alert to chronic nervous exhaustion, the differential diagnosis should not be difficult.

Mild recurrent acute appendicitis.—This is the most frequently considered organic disease. The pain of mild recurrent appendicitis tends to occur in attacks with complete relief between attacks. The pain is rather constant and is confined to the right lower quadrant. The pain in functional disease does not often occur in attacks; it is more intermittent and may be present in both lower quadrants. Nausea and deep tenderness in the right lower quadrant suggest an appendicitis. The attack is usually severe one day with residual tenderness the next day, and complete freedom from symptoms on the third day. The pain and tenderness in functional disease varies little in intensity. Functional disease does not give rise to a leukocytosis. A past history of similar attacks is quite helpful as is the absence of symptoms suggestive of a chronic nervous exhaustion. Occasionally a background of chronic nervous exhaustion is present, the white blood count is not significantly elevated, yet the symptoms and findings suggest a mild recurrent appendicitis. A therapeutic test by administering an antispasmodic drug is then helpful. If the distress is owing to irritability of the bowel, the antispasmodic drug will relieve it. If the distress is owing to appendicitis the antispasmodic drug will not relieve it.

Peptic ulcer.—Peptic ulcer is to be considered when the pain is in the upper abdomen, burning in character, intermittent, and relieved by alkali. The nervous, tense individual suggests the possibility of a peptic ulcer. The patient with functional disease, however, usually, has food distress and not food relief. His pain is not cyclic; there is no pain, food relief rhythm. The x-ray may reveal pyloric or duodenal spasm in functional disease, but usually the stomach and duodenum are entirely normal. The distress is poorly localized in functional disease, while in peptic ulcer the patient usually accurately localizes it.

Cholecystitis.—The patient with functional disease frequently complains of bloating after meals, associated with upper abdominal distress. He presents a long list of foods known to disagree with him. Often he has eliminated one food after another thought to be the cause of his distress. Bland foods may cause as much distress after eating, in functional diease as the so-called gall-bladder foods. In functional disease the pain is not cramping or severe, there is no radiation, and it usually follows eating irrespective of the food taken. There is no history of jaundice. The x-ray, of course, reveals a normally functioning gall-bladder in functional disease, and minor variations in size, contraction or density of shadow are not to be considered as owing to some degree of organic disease.

Adhesions.—The patient may complain of abdominal pain, bloating and perhaps constipation, and ascribe his symptoms to adhesions from previous operations. The previous operation usually was performed without relief or change in the type of distress. The patient now interprets the same original pain as owing to adhesions. The history and examination do not suggest obstructing adhesions and the therapeutic test by an antispasmodic drug usually re-

lieves their symptoms. The presence of a chronic nervous exhaustion is evident.

Pelvic disease.—The patient may present symptoms suggestive of pelvic inflammatory disease. In functional disease the history of previous pelvic infection is vague. There is no history of exacerbations as in pelvic inflammatory disease. On examination diffuse tenderness is found, but all pelvic structures are freely movable without increasing the pain, no masses are palpable, and the examination is objectively normal. Tenderness does not constitute pelvic disease. The history of chronic nervous exhaustion, if sought, is usually quite evident.

COMMENT

It is evident, therefore, that functional disease gives rise to syndrome patterns distinguishable from organic disease. The diagnostician and surgeon must be alert to functional disease and exhaust thoroughly all suggestive leads in the history and physical examination. Failure to obtain relief from surgery is discouraging to the patient. The pre-existing chronic nervous exhaustion may be aggravated. Occasionally temporary relief is noted, ascribed to mental relaxation and rest incident to convalesence and to the fact that something positive is being done. However, when the patient returns to his old habits, the symptoms return. It is important that the surgeon also realizes that, while organic disease is present, it may be dormant, and the presenting symptoms are those of associated functional disease. Removal of the dormant organic disease will not relieve the patient and may aggravate the chronic nervous exhaustion.

Treatment of chronic nervous exhaustion.—The correct diagnosis of chronic nervous exhaustion is often made but the patient curtly dismissed after being told there is nothing the matter. The pain, the exhaustion and other symptoms are real and the patient needs more positive help. The patient is grateful and is benefited by a few minutes discussion along the following four headings: (1) The patient is told he has a definite disease, a functional disease, a chronic nervous exhaustion. Functional disease is briefly discussed, stressing that it is real and is well understood. (2) The patient is told he definitely does not have the commonly suggested organic diseases, that his functional disease can mimic these organic diseases. (3) Attention may be called to causative factors of chronic nervous exhaustion in the patient's history. Problems of adjustment of these factors to the patient's daily activity and the need for this adjustment are discussed. (4) The patient with abdominal or pelvic distress may be given, when indicated, an antispasmodic drug combined with a sedative such as phenobarbital. He is told the tablet is an aid until he can relieve the causative factors. It is explained to him that the ultimate cure lies within himself. The treatment is one of sympathetic explanation and encouragement.

CASE REPORTS

A few cases are briefly reported to illustrate some of the more common problems in the diagnosis and treatment of functional disease.

FUNCTIONAL DISEASE WITHOUT ORGANIC DISEASE

Case 1. — A male, age 21, had complained for a year of abdominal cramping pain in the right lower quadrant. The pain was frequently associated with nausea. Belching or a bowel movement occasionally brought relief. Of late the pain was periodically more severe. The patient stated he had chronic appendicitis. Physical examination revealed a thin, active male. The examination was normal except for the abdomen. Slight tenderness was elicited in both lower quadrants. The leukocyte count was normal.

Further direct questioning then revealed the boy attended college from 8:00 A.M. until noon, worked in a factory from 4:00 P.M. until midnight, and then visited his girl friend until 2:00 A.M. He had a high tension job at the factory. On days he was able to sleep one hour longer he felt better. A diagnosis of chronic nervous exhaustion, with irritability of the bowel, was made. His condition was explained to him. He was advised to obtain more rest and reduce his activity. Antispasmodic drugs were given. He returned a few months later stating he had had an appendectomy. He again complained of the same original pain. It had returned upon him after resuming his previous schedule.

Case 2. — A woman, aged 46, had complained of attacks of pain in the lower abdomen for the past two years. There had been a more severe attack on two occasions. The pain was cramp-like in character. It was not influenced by eating or by a bowel movement. She had been advised that an infection in the left tube and ovary was present and an operation was necessary. Further direct questioning revealed the patient had an only son. She had been perfectly well until three months after his induction into the army. She worried about him. The first more severe attack followed his oversea orders, and the second followed the receiving of a letter telling of his first combat experience. Examination revealed an intense, worried, obese female. The examination was essentially normal except for a

diffuse tenderness throughout the pelvis. There were no masses. The structures were freely movable. A diagnosis of Chronic Nervous Exhaustion, with irritability of the bowel, was made. The diagnosis and environmental correlations were discussed with her. Antispasmodic drugs were given for a short time. She returned in one month less tense and without distress.

COMMENT

Cases in which organic disease does not exist represent the more common problem. The surgeon must be alert to leads in the history and physical examination suggestive of functional disease. Operations done for patients in this group bring no comfort to the patient or surgeon. Operations done to relieve the patient's mind only aggravate the condition and may be the start of a vicious cycle of operations for the relief of the same functional pain.

DORMANT ORGANIC DISEASE IN PRESENCE OF ACTIVE FUNCTIONAL DISEASE

Case 3. — A woman, age 31, came to us for the repair of a ventral post-operative hernia. She had had elsewhere a hysterectomy ten years previously. A ventral post-operative hernia was repaired two years later but recurred six years previous to her admission. It was enlarging. In addition to the hernia she complained of attacks of nervousness associated with epigastric fullness, dyspepsia and diarrhea. She admitted the attacks followed some nervous system irritation. Between the attacks she felt good. The diarrhea did not awaken her at night. There was no blood, pus or mucus. Her dyspepsia followed many foods. She complained of no heaviness in the lower abdomen, no cramping abdominal pain, nor of weakness in the abdominal incision. She was advised to have the hernia repaired but was told her symptoms were owing to a chronic nervous exhaustion and would not be relieved by repair of the hernia. The background and treatment of the chronic nervous exhaustion were outlined to her. She made an uneventful recovery from the operation. The functional symptoms diminished in intensity as she learned to avoid nervous system irritants.

COMMENT

This patient came for the repair of her hernia so that she might obtain relief of her symptoms thought to be owing to the hernia. It is quite important to impress patients with dormant organic disease and active functional disease that operations performed for the eradication of the dormant organic disease will not relieve the presenting functional symptoms. The patient otherwise will be depressed by the persistence of the symptoms and the functional disease will be aggravated. The functional disease must be brought under control before the dormant organic condition is corrected. If the patient understands the symptom correlations, and the functional disease is well controlled, the dormant organic disease may safely be corrected.

ACTIVE ORGANIC DISEASE IN PRESENCE OF FUNCTIONAL DISEASE

Case 4. — A woman, age 57, had been seen on two previous occasions for functional complaints, referred by the patient to the thyroid gland on the first visit and to the pelvis on the second. The history, obtained at the time of the consultation in question, revealed an epigastric burning pain coming on in mid-morning and mid-afternoon, and, of late, awakening the patient at night. There was some radiation of pain into the back. Nausea was frequently noted with eructation. Medical management elsewhere for three months had not materially improved the condition and surgery was advised. X-ray revealed a duodenal ulcer with crater formation and moderate gastric retention. There was obvious functional disease present. She was nervous, worried, and occasionally became weak and dizzy. Physical examination revealed a tense, thin, cooperative individual. After a hospital study of a week, a subtotal gastric resection was advised and performed. She made an uneventful recovery and left the hospital two weeks post-operatively. About one month following operation she became quite upset, complaining of headache, dizziness and experienced taste and smell perversion. She admitted listening to some misguided friends. For the next three months she was quite a task for her family and various doctors were consulted. A slow improvement finally was noted and at the end of a year she seemed quite adjusted, was eating well and appeared happy. She was free of gastric symptoms.

COMMENT

This type of case probably is the most difficult to evaluate. Definite organic disease is present and surgical interference is indicated, yet the presence of active functional disease presents definite contraindications for surgery. The active organic disease may be aggravating the functional disease and its correction may aid in the recovery from the functional disease. However, the surgical trauma may so aggravate the functional disease that the patient's condition is definitely made worse. The urgency of need for an operation to relieve the organic disease must be evaluated. If surgery is not urgent, the functional disease must be controlled preoperatively.

In the case presented the functional disease appeared well controlled preoperatively. The surgical trauma did not immediately aggravate the condition, but one month later, when the patient was subjected to additional environmental

irritants, a severe chronic nervous exhaustion developed and recovery was slow. Much sympathetic explanation and encouragement was necessary to relieve the patient.

SUMMARY

1. Functional disease, limited in this paper to chronic nervous exhaustion, giving rise to abdominal symptoms owing to irritability of the gastrointestinal tract and to related causes, denotes definite specific syndrome patterns.

2. Functional disease is the great mimic of organic disease, but careful attention to suggestive leads in the history and physical examination will permit the physician to differentiate organic from functional disease.

3. The surgeon must recognize functional disease and avoid errors of diagnosis and treatment. Operations may be performed without benefit to the patient or even with aggravation of symptoms owing to failure to recognize functional disease as the causative factor.

4. The treatment of functional disease follows definite pathways of sympathetic explanation, encouragement and the administration of suitable drugs when indicated.

5. Careful study and evaluation of all factors are necessary for the successful management of the case in which organic and functional disease coexist.

SOME REASONS FOR OCULAR DISCOMFORT

RALPH H. WOODS, M.D.

LASALLE

The outstanding cause of discomfort in eye workers is undesired prism effects due to failure to analyse the prescription, or failure by the oculist to check and analyse the finished correction before delivery to the patient.

Other factors equally as elementary and as universally overlooked are the balancing of accommodation and convergence, cyclophoria and anisometropia.

I have chosen to discuss superficially these few items for the reason that they are so universally ignored, yet so essential to the well-being of each individual examined.

The greater majority of discomfort cases are students, preachers, doctors, lawyers and other desk workers. One has only to ask himself where such an individual has his discomfort. Is it at infinity, or is it at the stipulated reading distance? Reading distance, of course! This calls to mind the case of the twenty-five year old school teacher with five pairs of glasses, all fitted by reputable oculists, all essentially the same correction, +.25 or —.25, both spheres and cylinders fitted under drops. The teacher's complaint was inability to correct papers and to study without fatigue. No one had taken the trouble to measure the punctum proximum. The punctum proximum proved to be at 13 inches. She needed a +1.00 add to give a diopter of reserve accommodation. Any discomfort case accepting only a +.25 or —.25 sphere or cylinder has something wrong besides this trivial refractive error.

Again, there is the case of the ten-year old school boy who required a +2.00 to make his eyes equal to the eyes of an emmetrope for distance. He was refracted under atropine. He returned six months later with the statement that reading was difficult. The amplitude of accommodation was then measured and showed that he needed an additional +2.00 add. The amplitude should have been measured first before the drops were used.

Measuring the amplitude of accommodation is just as essential as the static refraction.

We are here face to face with the subject of synkinesis, in which with each prescription for lenses we aim to secure some semblance of balance between accommodation and convergence. These two functions can be separated only within certain limits if the patient is to remain comfortable.

At this point I desire to admonish readers never to depend upon the findings with the Maddox Rod or with the cover test in discomfort cases. Never!! Either of these procedures shows what the extrinsic muscles *may* do when suspended. Neither one shows what those muscles *can* do when called upon to work. Their actual lifting power is the information we must have.

An emmetrope in reading at 13 inches uses 3 D of accommodation and 3 M. A. of con-

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Presented before the Section on Eye, Ear, Nose and Throat, 104th Annual Meeting, Illinois State Medical Society, Chicago, May 16, 1944.

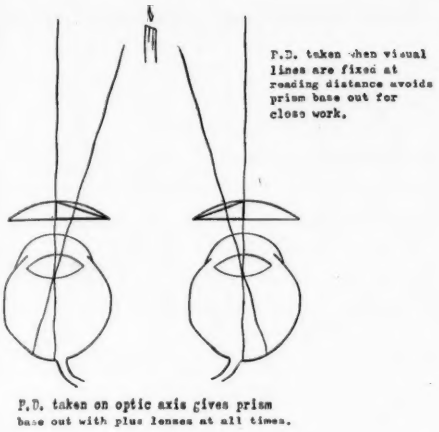
P.D. taken when visual lines are fixed at reading distance avoids prism base out for close work.
P.D. taken on optic axis gives prism base out with plus lenses at all times.

Figure 1

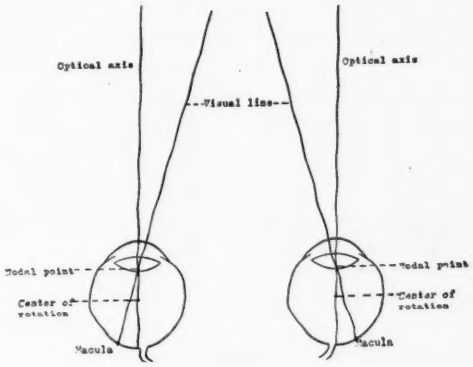

Figure 2

vergence. A 5 D hyperope in reading at 13 inches without his lenses, uses 8 D of accommodation but only 3 M. A. of convergence. Prescribing a +5. establishes synkinesis and makes the individual equal to the emmetrope of the same age, if such lenses are properly centered for the working distance.

Suppose we add 1° * prism base out to the correction of our 5 D hyperope. When reading at 13 inches he ordinarily uses 3° of convergence, but because of the 1° prism base out we have added, he must use 4° * of convergence to maintain binocular single vision. This eye worker is, of course, uncomfortable. The situation is exactly that with which the average refractionist is encumbering his patients day after day.

When measuring the face and prescribing plus lenses, the lenses should be so placed before the eyes that the visual axis of each eye falls through the optical center of the lens in order to avoid untoward prism effect. (Figure 1).

One must bear in mind that there is a wide difference between the optical axis and the visual axis of an eye. The usual technique is to measure and record the optical axis with the vision fixed at infinity as the pupillary distance.

A moment's study of the drawing (Figure 2) will explain the difference between the optical axis and the visual axis, and why the visual axis should be used as a basis for the pupillary distance.

The optical axis is a line drawn from the posterior part of the eye through the center of rotation, then through the center of the cornea into space.

The visual axis is a line drawn from the macula through the nodal point and extended into space. In hyperopia it falls to the nasal side of the corneal center. In high myopia it may fall to the temporal side of that center.

From experimentation with curved reflecting surfaces, we know that an image from a convex mirror is virtual, upright, reduced and is focused behind the mirror, never farther back than the principal focus.

The front surface of the cornea is a convex mirror.

If one holds a minature light, as our opthalmoscope globe, before eyes to be observed, a reflection (or reflex) is noted from each cornea. (Optically, this reflex is not from the surface of the cornea, but from behind its surface. However, if the eye is looking at the light, the image is on the visual axis). Now if the observer closes one eye, places the minature globe immediately under his open eye, takes a position at the usual reading distance of 13 inches (or 16 inches if that reading distance is desired) directly in front of the patient, and instructs the patient to gaze directly at the miniature lamp, he, the doctor, is enabled, with his one open

*Degree (°), Prism diopter (Δ) and Centrad (∇) in the powers we use in regular routine are practically identical up to 20 and the terminology interchangeable. Thorning, Page 41, or Duke Elder.

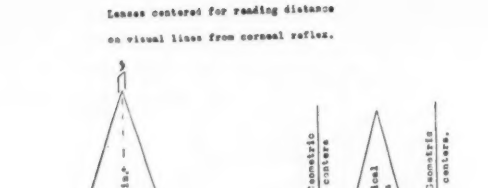

Figure 3

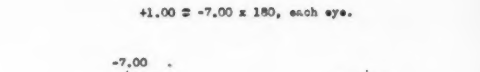

Figure 4

eye, by means of a millimeter rule, to measure from reflex to reflex, and obtain a very exact pupillary distance. For younger hyperopes who are desk workers, this is the only pupillary distance to be given on the prescription.

The procedure for the myope is considerably different.

(One will find by actual expermentation that if the patient is instructed to fix his eyes on the bridge of the operator's nose, and if the operator, with one eye closed and without alternating his eyes, measures from nasal limbus of one eye to temporal limbus of other eye of the patient, the measurement thus taken will correspond closely to the reflex measurements. This measurement is also taken at the patient's specified close working distance).

What happens when the distance P.D. is prescribed for close working hyperopes? Use the example and drawing given in a previous paragraph and remember that each millimeter of decentration on a 1 D lens gives 1/10 degree of prism. There is at least two millimeters difference on each eye between the distance P.D. and the reading P.D. If the distance P.D. is prescribed, the 5 D hyperope, in reading, will have to overcome 1 prism diopter base out on each eye. Discomfort, of course, or repression, should his adduction and reserve convergence be low. (Figure 3).

Vertical displacements through faulty grinding and careless inspection are a very frequent causes of discomfort to the patient and grief to the physician and will continue to be so until such time as the physician learns to spot centers and put the responsibility for error at its source; i.e., the optician. The time to do this is before the prescription is delivered.

On a low-powered lens, it may make little or no difference, but on a formula such as went from our office recently —
R+1.00 —7.00 × 180, L+1.00 —7.00 × 180, the left glass had its center ground down 4 millimeters below the right. In the vertical meridian of this lens the power was —6. When the patient looked straight ahead he had to overcome 2 4/10 degrees. It was simply intolerable. (Figure 4).

When the complaining patient returns, the psychological moment has been forever lost.

A good pharmacist checks and rechecks every prescription, item by item. The optician is expected to analyse every optical prescription, but so very often he does not do so. His error, if not detected by the oculist, is interpreted by the patient as the oculist's error. Therefore the oculist should neutralize every lens, spot every axis, spot every center, vertical and horizontal, and analyse prism effects as the lens is laid out on a protractor before delivery to the patient. No one can claim to be a finished opthalmologist until he can analyse a lens as readily as he can diagnose a pathological state.

Faulty facial adjustments and alignments and the correction are also a part of a finished oculist's job in the avoidance of discomfort.

Since so little is said about cyclophoria and since it is a real clinical entity and not at all un-

common, I shall make passing mention of its detection and treatment.

Not long ago I assisted with an examination of a group of pre-school children. For each child I used the cover or screen test. The left eye of one youngster gave a very visible torque under cover and recovery on lifting the card. This particular eye rotated on its anterior posterior axis, allowing the vertical axis to rotate out at the top, pointing to a deficient innervation to the superior oblique. In this situation the inferior oblique came into ascendency and the eye was also rolled up and out. The diagnosis, of course, was a 4th nerve palsy.

Frequently we hear the term axis tolerance, which is another way of avoiding the nomenclature of cyclophoria. Cyclophoria may pre-exist or be introduced by faulty placement of cylinders.

Cyclophoria is quickly measured by two Maddox Rods, one red and the other white. These may be placed so that the streaks will fall either both vertically or both horizontally. Either way.

Let us say that the streaks fall vertically. They should be parallel. When the red rod is on the right eye and the patient states that the red streak at its upper end rotates nasally, this eye is torqued. An eye is always rotated in the opposite direction to the false image. In this particular case the superior oblique is at fault with resulting so-called plus cyclophoria.

When a stigmatism is present to any degree and the axes are *a*-symmetrical, it may be necessary for comfort to shift one of them to make them symmetrical. It will then be necessary to change the power of the cylinder to get the best vision possible for this eye in the new axis. To get the exact differential of the cylinder power after shifting the axes, see table in Maxwell. Orthoptic exercises for cyclophoria are described in Savage's "Ocular Myology" and also in "Cardinals of Refraction".

Cyclophoria may be absent at infinity and decidely marked at the reading distance. The test is made exactly the same.

It may also be found that the correcting astigmatic axis may vary considerably for infinity and for reading. So also may the power of the cylinder. Either variation is a source of discomfort.

Anisometropia is another exasperating clinical entity. It may not only introduce the factor of metamorphopsia, but the correcting glass will likely produce undesired prism effects. Because of these two factors one can adhere to the rule that the spherical difference of the two lenses shall not be over 1.50 D.

Let us take the prescription of R+4.00, 20/20, L+7.00 20/30. It is explained to the patient that while the +7.00 gives very good vision, a +5.00 will be much more comfortable because of the difference in size of the two retinal images. He wants the +7.00 because of the vast improvement in vision and may tolerate it when looking into infinity. But what happens when he tries to read?

In reading, an individual looks 6 to 8 millimenters below the optical center of the lenses. With the right eye looking 6 millimeters below the center (using the rule previously stated) he will be receiving 2.4° base up, while the left eye will be receiving 4½ prism diopter base up. Some way must be devised to secure a compensating prism base down on the left glass for close work if this combination is to be used at all. It will, however, usually not be tolerated.

The above is parallel to a cataract case having good or fair vision in the unoperated eye. (One often wonders why he lets himself in for all this grief by operating).

The principal theme of this discussion is the analysis of lenses. Each lens should be spotted as to axis of cylinders, optical centers and the optical center of the segment if one is added. A simple, inexpensive contraption frequently advertised will do the work of instruments costing ten times as much. It consists of a sliding target carrying right-angled crossed lines, a clear glass with a spring clip to hold the lens under scrutiny, a pinhole for sighting through the line of centers, and a tooth pick to carry the pigment solution, which may be a little whiting in water.

If one is unable to neutralize by hand, then of course the purchase of a lensometer is justifiable. In all cases the analysis of lenses should be done before the prescription is delivered.

DISCUSSION

Commander James E. Lebensohn, Chicago: — Dr. Woods' talks are always stimulating because of his intense interest in the refinements of refraction. One must avoid leaving anything to the discretion of the optician. For instance, the refractionist may want to alter the P.D. for certain reasons to the advantage of the patient. The optician is not psychic, and cannot possibly know the variations that should be made. The

interpupillary distance for far vision should first be determined as accurately as possible. For children too young to cooperate a good approximation is secured by measuring the distance from the outer end of one canthus to the inner end of the other. In cases of squint or muscle imbalance the examiner and patient should face each other, fixing their opposing eyes alternately, while keeping the other occluded. The examiner with his left eye fixes the zero mark of the ruler in the center of the patient's right pupil. Then, while keeping the head stationary, fixation and occlusion are reversed in both patient and examiner, and the examiner notes with his right eye where the pupillary distance falls in respect to the left eye of the patient. In the standard method of taking the interpupillary distance, the patient fixes with both eyes at a distant object. Because most offices are so small, it is advantageous to have the patient look at an object reflected in a mirror on the opposite wall, which, of course, doubles the distance. Though Dr. Woods' method of determining the interpupillary distance at the near point is accurate, I believe it is preferable to deduce this mathematically from the distance P.D. (demonstration).

The synkinetic action of accommodation and convergence must not be overlooked. A myope, aged 30, recently consulted me because of difficulty in reading. Because of this complaint, a previous refractionist had reduced his correction of —3.00 S. in each eye, to —2.00 spheres, which made his reading difficulty even worse. Examination of the muscle balance disclosed an exophoria of 4 prism diopters for distance, 16 for near. Since one diopter of accommodation corresponds to 6 prism diopters of convergence, I increased his static correction by one-half diopter, prescribing for each eye —3.50 S. This stimulated his convergence sufficiently for him to read comfortably (demonstration).

Dr. Ralph H. Woods, LaSalle (closing): I want to thank Dr. Lebensohn. I agree with him, but he has opened an avenue for discussion which could continue all afternoon, so we will let it go for another time.

NEUROPSYCHIATRY TRAINING

(Continued from page 263)

County, the various psychiatric wards of private hospitals, and the psychiatric clinics of the Juvenile, Criminal and Municipal Courts. Preference will be shown to veterans of World War II.

Salary for the first year will range from $150 to $200 per month; second year $185 to $245; third year $310 to $360.

Applicants will send their requests to Dr. Harry R. Hoffman, State Alienist, Illinois Neuropsychiatric Institute, 912 South Wood Street, Chicago. These residencies start July 1, 1946.

THE CHICAGO PLAN OF TUBERCULOSIS CONTROL

FREDERICK TICE, M.D.
CHICAGO

The plan of tuberculosis control, at present operative in Chicago, rests essentially on the three-point program initiated in 1931. In 1931, when the late Dr. Allan J. Hruby and the speaker took office as the Directors of the Municipal Tuberculosis Sanitarium, they were faced with a very acute and pressing problem. There were seven hundred patients on the Sanitarium waiting list, the majority advanced cases. Similar waiting lists clogged the files of the other free institutions, Oak Forest and Cook County Hospital. Looking at the situation from another angle, there were around two thousand open cases roaming the streets and, to add the last straw, the State regulations declared that no open case of tuberculosis should live in contact with children. The prospect of hospitalization was slight or nil and the patients, as they waited, became progressively worse.

In common with experience elsewhere, the home treatment then available was inadequate. Cough medicine, periodic examination, and an occasional x-ray do not cure advancing tuberculosis, nor do such measures influence, to any degree, the management of the open case. To our mind, back in 1931, something more realistic than expectant treatment in the home had to be at least attempted.

THE THREE-POINT PROGRAM

In view of all the facts, we decided to make the attempt. In appraising the problem, we envisioned three possibilities:

A — An increase in institution accommodations
B — A massive collapse therapy program
C — Immunization by the BCG vaccine

The more we considered these three possibilities the clearer it became that none of the three separately, but all three combined held the answer. Institutional expansion alone would not suffice. For economic reasons, expansion could never grow to meet the need. A few figures will illustrate this.

When we took office in 1931, there were 18,317 diagnosed cases of tuberculosis in Chicago and 1,567 beds. Manifestly, it was physically impos-

Read at Institute of Medicine meeting, Palmer House, November 14, 1945.

sible to find a bed for every patient. Would it continue to be impossible? When we considered that there were in the community at least as many unknown as known cases, the problem multiplied itself. Look as far as we might into the future, estimate as well as we might the taxpayer's ability to pay, we would never see the day when every tuberculous patient that needed an institutional bed would have a bed. In any event, a point only too frequently overlooked, the bed was not for the "duration". With the average case the period of sanatorium stay is comparatively short; the patient spends many more hours of illness outside the institution than in. Taking all cases, recessive and progressive, a year in the sanatorium and three or four years in the home might not be a bad guess. Out-patient management, in comparison with sanatorium care, represents only a fraction of the cost. The matter of cost was fundamental. To us, enlargement of the field program and extension of the sanatorium influence into the home constituted a large part of the answer.

All we could see back in 1931 (today, for that matter) was a modest expansion in institutional facilities, with an active supplementary program, including BCG, in the field.

Increase in Institutional Accommodations. — Consequently, we set our caps for the first point in the program, the expansion of institutional facilities. Though working against the handicap of a restricted budget, 121 beds were added to the Sanitarium, 250 more with the inauguration of the North Riverside Branch. Later, the surgical division at the Sanitarium was expanded and 60 more beds added. Further measures of expansion, including conversion of a nurses' home and a P.W.A. addition, were halted abruptly for lack of funds.

It is necessary to mention that available tuberculosis money is not, in any sense, adequate to the need. Lack of funds has been the ever-present bugbear in the Chicago program. Detroit, for instance, with half the population, has a larger tuberculosis appropriation than have we. Repeated efforts by the Directors to remedy the condition and secure larger appropriations have been unavailing. For the time being, therefore, and for lack of better, we are obliged to content ourselves with the physical expansion already secured.

Physical expansion, however, is not everything. There is such a thing as functional expansion and functional expansion is no myth. By acceleration of tempo, shortening of the sanatorium stay, generous use of out-patient facilities, a large institution can easily gain the equivalent of physical increase. In other words, thinking in terms of expansion, turnover must be considered as well as walls. If, for instance, through new technics, a thousand-bed sanatorium, without impairing its results, can reduce the average sanatorium stay from twelve months to eight months, it will have increased its capacity about one-third, or by 330 beds. In 1931, the technics were available; they were new and their consideration brings us to the *second point of the program, large scale collapse outside the sanatorium.*

Since we could do nothing further with the Sanitarium walls, we could attempt to expand the Sanitarium influence; field pneumothorax, in massive application, could be made to carry at least part of the institutional load. In our reasoning at the time, ambulant collapse therapy became definitely hooked up with the bed shortage, a natural derivative of our expansion difficulties. The relationship is, perhaps, best expressed by a quotation from one of our collapse therapy bulletins. I quote:

"Sanitarium accommodation is limited, the confines are soon reached and beyond that we can not go. Not so with the extramural branch! Here, in the last reaches of Sanitarium inflation, the field clinic begins, expansile, inexpensive, elastic in its application to changing needs."

The Collapse Therapy Plan. — Such were the motives behind the ambulant collapse plan. The road to fulfillment was not easy. In 1931, pneumothorax held a very minor place in the tuberculosis program. In accordance with the thought of the day, the indications were narrow, the field restricted. By and large, pneumothorax was considered a sanatorium measure, a delicate, even dangerous measure to be applied only after the customary sanatorium routine has been applied. Many sanatoria were doing no collapse; some had five per cent of their patients under

pneumothorax; very few, not including our own, ran over ten per cent.

Neither from the point of view of functional expansion, nor from the point of view of public health, had the possibilities of collapse therapy been correctly estimated. Pneumothorax, within its indications, was beneficial to the individual patient. Pneumothorax, when properly administered, converted the sputum in fifty per cent, or more, of suitable cases. These were the facts and they were known. The knowledge, however, was not carried to logical conclusion or practical application.

The value of large scale pneumothorax as a public health instrument was not recognized. The open case was admittedly the crux of the tuberculosis problem. Much was said about institutional isolation; nothing said about the mechanical isolation of collapse. To us this latter method seemed of vital importance and we made ourselves very clear on the matter, as evidenced by a paragraph in the 1931 Collapse Therapy Bulletin. I quote:

> "The mechanical isolation (of collapse) must be from its nature, more perfect and complete than personal isolation. The immense significance of this fact must be realized and properly evaluated. We can turn off the fountains of infection more expeditiously, more thoroughly, by compressing a diseased lung than by isolating a patient."

All this seemed very fair on paper. How could it work in practice? Was field pneumothorax, in widespread application, practical? To carry the advanced case through the clinic, from the initial injection onward, seemed no light undertaking. At the time, dangers of ambulatory pneumothorax were over-emphasized, even exaggerated. According to the medical thought of the day, the initial injection and the preliminary stages of pneumothorax could not, and should not be administered outside the Sanitarium. This was the first principle and disregard of it implied dire results, embolism, shock, infection, and other serious complications.

A Personal Experience.—To the speaker, this catalogue of dangers and disasters was rather difficult to understand. As it happened, he had had some interesting experiences in ambulant collapse therapy. In 1898, just after finishing his internship at the County Hospital, while a house physician at the old Dunning Tuberculosis Hospital, he had worked with John B. Murphy in a pneumothorax program, using a technic that one would term, now-a-days, as crude, to say the least. No fluoroscope, no x-ray, no manometer! Not even transportation! The patients had to walk, or ride bicycles for a distance of two or three miles and, strange as it may seem, results were usually good.

The recollection of that experience could point in only one direction. If ambulant pneumothorax, without manometer, or x-ray, was possible in 1898, ambulant pneumothorax conducted with the aid of modern appliances should be possible in 1931. Encouraged by this line of reasoning, encouraged further by sanatorium background to provide for emergencies, by a staff of 150 field nurses to provide supervision in the home, the extramural collapse program was initiated. Simultaneously, the dormant collapse program at the Sanitarium (66 patients — 6.5 per cent) was stepped up and measures of coordination between the two branches arranged. Emergency cases, cases with complications, or cases needing additional surgery were to be sent to the Sanitarium; in return, Sanitarium cases with well-established collapse were to be referred to the field organization. From the first the plan prospered and the volume of field collapse increased faster than had been anticipated.

Development.—The story of the physical development is interesting, even amusing. The first pneumothorax station was started in the basement of one of our clinics. Soon, however, the volume outgrew accommodations and the old Iroquois Memorial Hospital on Wacker Drive was taken over for collapse work. The entire four floors of this hospital were soon busy with collapse activities and again, as a suit and a growing boy, volume outpaced accommodations. The patient-load, even on such a building as the Iroquois, was too great. Despite good organization, congestion occurred and the patients complained of waiting. To obviate this difficulty we decided, a year or so ago, to decentralize, proposing as the framework of this decentralization, the establishment of a pneumothorax station in each of our seven clinics. Five of the stations, plus a station at the Sanitarium, are already in full operation and the two remaining

clinics are being organized for pneumothorax work.

Though the process of decentralization has introduced a new factor of complexity in the matter of records and statistics, the advantages outweigh the disadvantages. Congestion and waiting are eliminated, and the patients, who previously had to travel long distances, receive their treatment in the neighborhoods in which they live.

Growth in Terms of Figures.—Some figures will illustrate the growth of the field collapse program. Starting with a few refill cases in 1931, 314 patients were under treatment two years later. By 1936, when the clinic was moved to the Iroquois Hospital, 1,123 patients were being cared for. As of January 1, 1945, the clinics had reached a registration of 1,800 cases. Of these, in round numbers, 1,600 are under actual inflation, 150 are under observation for collapse, and 50 are under post-treatment supervision. A good percentage of these cases have had their entire treatment from the initial injection onward, in the field.

Results.—The results of the work to 1938 have been fully chronicled in our Collapse Therapy III Bulletin. At the time of the report, 76 per cent of the treated cases were living as against 39 per cent of the controls, that, with regard to positive sputum patients alive at the time of the report, 83 per cent of the minimal cases were converted, 76 per cent of the moderately advanced, and 68 per cent of the far advanced.

In the main, the tenor of these results has been maintained to the present time. An excellent proportion of the positive sputum cases are being converted and are thus made safe for the community. A large number of patients are being rehabilitated and returned to gainful occupation. So definite is the trend toward resumption of gainful occupation that it has become necessary, repeatedly, to augment night sessions in the interest of the pneumothorax patients who are working during the day. At the present time, 13 night sessions are operative to care for the 635 patients who report in for their refills after the day's work. The number is growing daily and such growth offers the best and clearest indication that large scale collapse therapy, in addition to its public health implications and individual benefits, is a measure of physical and economic rehabilitation.

The survey of the material is now in progress and final and complete analysis of the ten years collapse will soon be available. From present indications, such final analysis will corroborate our previous reports and re-emphasize our 1931 arguments for large scale collapse.

Before leaving the subject of collapse therapy, we have to ask ourselves one question. Is pneumothorax in widespread, even massive application, pneuothorax of the type pioneered by the Municipal Tuberculosis Sanitarium, justifiable and practical? We believe it is. Our results have been amply confirmed by the work of others, and everything points in one direction. We are as convinced now as we were in 1931, that collapse of the kind described, is both a fine public health instrument and a medium of cure and rehabilitation for the individual. At this morning's session, Dr. Camillo E. Volini has elaborated on this subject in his presentation of "Pneumothorax Therapy, Including Ambulatory Pneumothorax." Collapse therapy, however, is directed toward established tuberculosis. Is it necessary to wait until tuberculosis becomes established? This brings us to the last point in the program, BCG vaccine.

BCG

We have long been convinced that public health authorities in this country are unduly indifferent to the possibilities of immunization. The speaker refers, of course, to immunization by the Calmette-Guerin method, the only method, to date, of approved value. The worth of the vaccine has been liberally attested by the results in Europe and the South American countries, by the million children vaccinated in France, 500,000 in Roumania, the 86,000 in Brazil, the 56,000 in Argentine, the 58,000 in Uruguay, the 20,000 in Canada.

Influenced by this world opinion, Dr. Hruby and the speaker, when attending the International Tuberculosis Congress at The Hague, visited the Pasteur Institute. Calmette, after repeated and intimate consultations, and after inspection of his laboratory, convinced us that BCG was harmless, that it was effective, and that there were simply no contraindications to its use. As a result, in 1933 we sent a competent bacteriologist to study the technic at the

Pasteur Institute. This representative, Dr. Sol Roy Rosenthal, spent several months at the Institute, studied the technic under direct supervision, and brought the cultures back with him. Since that time Dr. Rosenthal has been working in a special laboratory, equipped with every possible device to insure safety, accuracy and thoroughness.

At first the study was limited to experimental animals and the research fully corroborated, in every respect, the findings of the foreign workers. More recently the work has been extended to children and young adults and, to date, 2,178 have been vaccinated and 2,157 others, in similar economic and social brackets, taken on as controls. In the vaccinated group there were three clinical cases of tuberculosis, with one death, whereas in the control group there were twenty-three cases of clinical tuberculosis, with four deaths.

All in all, the case for BCG seems fairly clear. In over three million children immunized with BCG there has not been one proved case of resultant tuberculosis. Figures are only part of the picture. The statistical phase is confirmed and reaffirmed by certain physiological considerations. We are, I suppose, entering debatable ground. In certain quarters, tuberculosis immunity is still controversial. It is necessary to remember, however, that immunity against smallpox was held as controversial for a long time and that full and final acceptance is comparatively recent.

Allergy and Immunity.—The author belongs to that group who believes that allergy and immunity are closely related. In large urban centers the majority of people eventually develop allergy as represented by the positive tuberculin reaction. If allergy has to come anyway, why not allergy of a beneficient type? If infection has to come, why not measured infection with an avirulent organism of bovine type rather than measureless infection with a virulent organism of human type? Why not attempt to neutralize the danger by a scientific substitution that is harmless and that holds promise of a good measure of immunity? Why not follow the lead of the European and South American countries and extend the benefits to as many threatened individuals as possible? Such is our present attitude and the stand seems logical.

If this is true, and we believe it is, all indications point to BCG as a pivotal component of the tuberculosis program. Through collapse therapy, sanatorium care, home care, and follow-up we can, more or less, control tuberculosis. Only through BCG or some similar immunizing procedure which infiltrates slums, where tuberculosis breeds, can we hope to eradicate it completely.

At the recent International Congress of BCG which met in Havana, Cuba, Dr. Sol R. Rosenthal presented a paper entitled, "Ten Years' Experience with BCG (Experimental and Clinical)", which constitutes a resumé of his work up to the present date.

Encouraged by results to date, the Municipal Tuberculosis Sanitarium is on the eve of great expansion in the BCG program. Contact with the physicians and workers in negro areas of high tuberculosis mortality has been established and plans are being made to coordinate the BCG program with our total x-ray survey of the congested areas. Fortunately, this latter project is in full swing and some discussion of it is essential to the purpose of this paper.

Mass case-finding, through the x-ray, is an interesting development and its realization in Chicago constitutes Point Four in the program. By total survey (a term coined for the occasion) is meant the x-ray examination of entire communities, with special emphasis on areas of high tuberculosis mortality. Chicago, in common with other large communities, had run the gamut of survey possibilities, including routine clinical surveys, Saturday morning surveys, tuberculin surveys, and school surveys with the tuberculin-x-ray screen. The school surveys deserve a special word.

The School Survey.—In 1937-38, with the help of the Tuberculosis Institute of Chicago and Cook County, we undertook a survey of the Chicago schools, public and parochial, grammar and high. In the three-year period, 167,000 children were tuberculin tested and 23,000 positive reactors x-rayed with standard size film. The results were unsatisfactory. The cost per case found was much too high, over five hundred dollars for each new case brought under observation. In the lower grades, according to our

experience, the cost was definitely prohibitive. In 58,000 children under twelve, subjected to examination with the tuberculin-x-ray screen, only nine cases of pulmonary tuberculosis were found.

The school survey not only taught us that it was financially prohibitive, but led to other changes in technique. Among these, was the instituting of a single Mantoux tuberculin test, instead of the three graduated doses as generally used, and by so doing reduce the financial cost and labor preceding the x-ray filming. Later it was found advisable, and expeditious, to abandon the tuberculin testing entirely, as it was far less expensive to go ahead and film the entire group, reactors and non-reactors.

Experience with the school survey was also responsible for another modification in technique, really an innovation, the building of the mobile unit. After completing the tuberculin tests, it was necessary for all of the positive reactors to visit the neighborhood clinic for the necessary x-ray filming, which usually required an absence from classes of from one to three hours. To obviate this loss of time, it was conceived, plans drawn, and special automobile truck constructed, provided with the latest type of x-ray equipment, a darkroom, three dressing rooms, electric lights, fans and heater. It was then a simple matter to park the unit on the school ground, connect the cable and x-ray the pupils in rotation, as previously arranged, without any loss of time. This, briefly, was the origin of the mobile x-ray unit, which is now available on the market, and has been generally adopted all over the country by civilian and government workers in the field of tuberculosis.

In the October 14, 1944 issue of This Week Magazine, published by the Chicago Daily News, there appeared an interesting article by J. D. Ratcliff, entitled "The Next Plague to Go", which outlines the proposed plan of Surgeon General Thomas Parran of the U. S. Public Health Service, in which no mention is made of the Chicago Municipal Tuberculosis Sanitarium, but emphasizes the three-point program, as already outlined, which has been, and still is, in operation since 1931.

The Miniature X-Ray and the Total Survey.—Dissatisfied with the results of the tuberculin-x-ray screen, convinced of the necessity of survey, we turned to other possibilities. Some other measures must be found, a measure, by preference, dependent largely or entirely on the x-ray. Since 1931, the Directors of the Municipal Tuberculosis Sanitarium had entertained the thought of massive x-ray survey in areas of high tuberculosis mortality. That was as far as we got. The survey ended with the thought. In terms of standard size films, the cost was too great and it was only with the advent of the miniature x-ray that we could see a way out.

Dating from DeAbreu's article, the speaker has been greatly interested in the potentialities of the miniature film for mass case-finding. A letter on the subject to DeAbreu, in 1938, for some reason or other, remained unanswered. Our interest, however, continued and the Municipal Tuberculosis Sanitarium worked with the General Electric in the development of the 4x5 apparatus.

As may be supposed, our cooperation was on the clinical side. We referred patients for x-ray and examined the films as the experiment progressed. The results were favorable and held good promise for our thought of total survey. As soon as a unit was available, we immediately laid plans for mass case-finding in the negro areas and started work on April 15, 1940. The approach had been worked out, detail by detail, and on somewhat unique lines.

Survey Technics.—A preliminary educational campaign paved the way and "X-ray to the Doorstep" became the slogan. Since we knew from experience that a large percentage of the residents would not come to us, we decided, as Mahomet with the Mountain, to go to them. Our mobile unit with its photo-roentgenographic equipment, was so routed from station to station, that no resident in the congested areas had to walk more than a block or two for his x-ray and many came from across the street or around the corner. A program of home visitation bolstered the effort and the response, from the first, was excellent.

Results.—In the two years that the survey has been operative, 79,232 applicants have been photo-fluorographed and 2,426 new cases of tuberculosis found on first examination. Classified according to extent of lesion, 1,138 were in the minimal, 940 in the moderately advanced, and 348 in the far advanced stages. Compare the 47 per cent of minimal tuberculosis found in the survey with the 18 per cent found in routine

clinic examinations, and we have some idea as to the merits of this type of case-finding.

Equipment.—Throughout the entire work, with the exception of some isolated experiments with the 35 mm. and a comparative study with the 70 mm. the 4x5 General Electric photofluorographic apparatus was used exclusively. Our experience with the 35 mm. was unsatisfying. On the other hand, our experience with the 70 mm. has convinced us that this new type of apparatus is designed to change the course of photo-fluorography very materially. As the subject of the 70 mm. is both topical and timely, a brief word as to our comparative study may be of interest.

To establish the relative merits of the 70 mm. and the 4x5, 1,813 industrial employes were subjected to examination by both types of equipment. The films were read independently by the three interpreters. The results, summarized in a paper presented for publication, will doubtless be of interest to those contemplating programs or actually engaged in survey. To boil the detail down to mere outline, one minimal case uncovered by the 4x5 was missed by the 70 mm. and in several other instances a case read as suspect by the 70 mm. was classed as minimal by the 4x5.

Before leaving the question of the survey, it may be well to mention two developments that resulted from the propaganda incidental to the work. Since these two developments, the professional school and the technical schools, have since became part of the Chicago plan, some discussion is in order. A word has been said concerning the educational campaign that paved the way. At first this campaign was directed exclusively to the laity. We found, however, as we went on, that the family doctor was the front line soldier and we needed him.

Post-Graduate Education.—"No tuberculosis program can hope to reach even a fair measure of success without the moral and practical support of the doctors in the community. The physician, at the bedside or in his office, exercises a more potent and salutary public health influence than do bushels of propaganda."

This quotation, taken from our 1933-34 Bulletin, dedicated to the Chicago Medical Society, defines the position as it affects us locally. In our educational effort we have always attempted to include the practicing physicians; as evidence to this effect, in 1934, in the Bulletin referred to, we offered the members of the medical society "a school of collapse". The language may interest you, and I quote:

> "Is there any good reason why the medical profession should not have an active, or even the leading part in a community collapse program? We see none. With the exception of the impoverished case, for whose care the public institution is designed, the practicing physicians might, or rather should, take over the entire program."

This represented our attitude toward the physicians in 1934, it represents our attitude now. Many Chicago physicians have taken advantage of our offer of pneumothorax training, many others, who could benefit both themselves and the community by a thorough grounding of the principles and technics of pneumothorax administration, have failed to respond. Needless to say, the offer still holds good.

In previous years, repeated attempts had been made to interest the practicing physicians in post-graduate tuberculosis work. Lectures were held at the Sanitarium, and due to time-consuming transportation, the attempts failed.

The Tuberculosis School.—This time, with the importance and scope of the survey in view, we decided that the attempt should not fail. Again the question of Mahomet and the mountain. Since the physician would not come to the School, the School would go to the physician. A comprehensive three months' curriculum was drawn up and the school, now called the "Neighborhood School of Tuberculosis" was established in the negro areas. Well over half the negro physicians of Chicago attended and received diplomas. The response was so good, the resultant cooperation so satisfying that the school is now being taken to other districts throughout the city. In the neighborhood clinics, the branch societies, in the hospitals, in any hall or meeting place which twenty or more physicians designate as a location, the school is established and the sessions organized to meet the convenience of the applicants.

This subject was the topic of discussion at this morning's meeting, and the speaker regrets that time does not permit the reading of the

three months' curriculum, most comprehensive and ideal.

We had rather expected that the sophisticates amongst the profession would look somewhat askance at our program of post-graduate education. Very much to the contrary has been the case, the school is going even stronger than it did in the negro areas and experience, to date, seems to guarantee post-graduate training a prominent place in our program.

The Technical School.—The second development referred to has to do with technical training. The volume of the survey work, combined with a restricted budget, made it extremely difficult, even impossible, to supply technical help. We needed x-ray technicians for our machines, laboratory technicians to make the thousands of sputa examinations incidental to the survey. As a natural sequence, therefore, with the thought of both using and training student help, came the x-ray technicians' school and the laboratory technicians' school. These schools serve a dual purpose, economy and education. Worthy young people are trained in a useful occupation and each student contributes a year's work to the institution.

Another educational effort consists of issuing a Bulletin, from time to time, presenting a report of the institutional activities and the results accomplished. The last, and most recent number, written by Dr. Richard Davison, the chest surgeon on the Consulting Staff, is virtually a complete textbook, and should be read and studied by every one interested in the surgical aspect of tuberculosis.

Postgraduate work has extended beyond the confines of Illinois, or our own country. At all times, there have been two or more doctors from some foreign country to study.

It is only just and fair to briefly refer to the recent vicious criticism of the Sanitarium, and the Board of Directors. The two investigating committees, one consisting of six members of the Restaurant Men's Association, to investigate the food and diets, and the other of three out-of-town non-prejudiced tuberculosis sanatorium superintendents, to investigate the medical care, both brought in very acceptable, if not complimentary reports. These reports were never published as the criticisms and misrepresentations were simply a camouflage to screen a far deeper sinister objective which, as time passes, will become more and more evident and lucid to all.

The reference to age, repeated and repeated, is true, but ignores the fact that with age and grey hair is associated knowledge and wisdom.

Finance.—At a round table discussion on finance, our eyes glittered and our hands shook. Millions! Where do they get them and how? All we've ever been able to get is a crust and a promise. Our appropriation, such as it is, barely suffices for the routine care of the 1,220 bed patients in the Sanitarium and the 12,256 patients in their homes. For the rest we've had to depend on outside support. When our first survey attempt hung in the balance, the Tuberculosis Institute came to the rescue. When we needed clothes, milk and extra rations for our clinic patients, the Illinois Club for Catholic Women answered the call. I could go on and on.

Quite recently the federal government heard the call and stepped into the scene as the fairy godmother. Through her faithful ministers, Dr. Hilleboe of the U. S. Public Health Service, Dr. Cross of the State Department of Public Health, Chicago's portion of the federal grant under Bill No. 417 has just been made available to us; no inconsiderable sum! Quite a respectable sum, in fact, sixty thousand dollars, the identical sixty thousand, the self same sixty thousand, dollar for dollar, that, according to one of the newspapers, was sent to me personally year after year after year.

What the newspapers say must be true. I got so I believed it myself. Sixty thousand and year after year! I read it, heard it, thought and dreamt about it and felt myself rich. Year after year after year! I must be Rockefeller. Then disillusion! Imagine how I felt when I learned it was all a mistake! Picture my chagrin when the first checks drawn against the sixty thousand, *my* sixty thousand, were mailed out from Springfield a week or so ago; not to me, but to a dozen or so brand new employes who had been with the institution no more than a month!

Having briefly and inadequately reviewed the three-point program, with its sequential activities, the writer will conclude by indicating, based on thirteen years of service, some of the de-

ficiencies and requirements of the Sanitarium:

1. There always has been, and still is, a crying lack of infirmary beds.

2. The personnel, medical and nursing, as well as the non-professional staff, is far inadequate and woefully underpaid.

3. Inadequate funds, which is basic, and absolutely essential for expansion and adequate maintenance.

It has been suggested in a recent report that Chicago needs 2,747 more beds. Using Jessamine Whitney's construction cost figure of $3,500 per bed, the building charges alone would run to $9,000,000. Add maintenance on a $4.00 per diem basis, $4,000,000 annually, and our present expenditure for Sanitarium and clinics of approximately two and one-half million seems meager indeed. Meager as it is, we have been unable to better it, and in the face of our experience the thirteen million still looks pretty far away, and very hazy. Somewhere between the two and one-half million and thirteen million lie the outer limits of physical expansion, and where this expansion ends field pneumothorax begins.

4. Adequate legislation, an amendment to the existing laws making it possible to forcibly segregate the open case of tuberculosis, regardless of age. Such a measure is absolutely necessary if tuberculosis is ever to be controlled or eliminated.

5. For many reasons, it would seem advisable to seriously advocate repealing the Glackin Law, and for the City of Chicago to deed, or sell, the Sanitarium to the State, and make it one of the proposed State Tuberculosis Hospitals.

PILONIDAL SINUS

Statistical Review of 300 Cases

MAJOR JOSEPH RAIDER, M. C., U. S. ARMY
AND
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This is a statistical review of the first 300 consecutive cases of pilonidal sinus since the opening of the hospital at Camp Polk, Louisiana. We will not deal here with the etiology or symptomatology of this condition nor discuss the embryologic origin. The current literature treats this subject adequately,[1, 2, 3, 4, 5, 6]. Suffice it to say that with the exception of one negro and one American Indian, this group comprised young white males in their early twenties and at their physical prime. Nearly two-thirds of these men attributed the beginning of their symptoms to some episode in the army; such as landing flat on one's seat from a parachute jump, riding in a jeep, and in general traveling on unimproved roads and cross country. (See Table 1 below).

Table 1
Occurrence of symptoms in 260 cases

Occurrence of Symptoms	No. of Cases	Percentage
Before Induction	97	37
After Induction	163	63
Total	206	100

Fifty men in this group had previously been operated on in civilian and army hospitals 68 times. Twenty-five of these were treated one or more times (one as many as six times) by incision and drainage. The remaining half in this group had a total of 26 excisions. On admission all required treatment, and their known combined past loss of time in hospitals already amounted to 2,195 man days, or an average of 43 *days* per man. (See Table 2 below).

Table 2
50 cases previously operated

Type of Operation	No. of Cases	No. of Operations
Incision & Drainage	25	42
Excision*	25	26
Totals	50	68

*Type of closure difficult to ascertain.

Our treatment of pilonidal sinus has been essentially the same as that outlined by the Surgeon General's Office[7]. Simple cysts and sinuses were treated conservatively. The infected cases, or those with frequent recurrent attacks, were either incised and drained or excised. Of the entire group, 283 cases were operated upon.

As will be noted in Table 3, 80 cases were incised and drained and 203 cases were excised. The type of closure in the excisions is outlined in Table 4. Roughly, three-fourths were closed by primary closure and the rest equally divided between partial closure and open packing. The material used was chromic catgut No. 0 for deep sutures and black silk No. 1 for the approximation of the skin. These sutures were removed on the 8th day. Bowel movements were discouraged during this period, and the patient remained in bed for an additional week. Post-operative treatment was routine with this exception, patients

were given ascorbic acid, 150 mgm. daily, for the first two weeks. This was for the purpose of creating a more firm scar,[8,9,10,11].

Table 3

Type of operation in 283 cases

Type of Operation	Kind of Closure	Number of Cases	Percentage
Incision & Drain.		80	28.3
Excision	Primary	151	53.3
Excision	Partial	26	9.2
Excision	Open Packing	26	9.2
Totals		283	100

Table 4

Type of closure in 203 excisions

Kind of Closure	No. of Cases	Percentage
Primary	151	76
Partial	26	12
Open Packing	26	12
Total	203	100

Hospitalizations. The hospitalization period for the respective groups appears in Table 5 below.

Table 5

Post-operative period of 283 cases

Type of Operation	Number of Cases	Post-operative Total Days	Avg. period in days
Incision & Drainage	80	1963	27
Primary	151	7260	48
Partial	26	1733	66.7
Open	26	2550	98

As will be noted, the combined total number of days spent by the 80 men, whose cysts were merely incised and drained, was 1,963, or an average of 27 *days* per man. The primary closure group of excisions totaled 7,260 days, or an average of 48 *days* per man. The partial closure group totaled 1,733 days, or an average post-operative hospitalization period of 66.7 *days*. A total of 2,550 days of hospitalization for the group with the open packing resulted in an average of 98 *days* post-operatively.

Pilonidal specimens. We found laboratory reports with measurements on 174 pilonidal specimens. The average specimen measured 6.4 cm. long, 2.6 cm. wide and 1.6 cm. deep. The largest single specimen in the series was 10.5 cm. by 5 cm. by 2.5 cm. However, we have a convalescent on the ward now, not included in this series, whose section of tissue removed measured 14 cm. by 4.5 cm. by 1.2 cm.

Complications. The most frequent post-operative complications, in the order of occurrence, were as follows: — (1) infection, (2) breakdown in scar, (3) hematoma. (See Table 6).

Table 6

Complications in 203 cystectomies

	No. Cases	Infection	Breakdown	Hematoma	No. Complication	%
Primary Closure	151	38	8	3	49	32
Partial Closure	26	3	5	—	8	30
Open Packing	26	1	1	—	2	7
Totals	203	42	14	3	59	
Percentage	100	20	7	1	29	

In all we had 42 infections, 14 breakdowns in scar, and 3 hematomas, a total of 59 complications. In the primary closure group alone, we had 38 infections, 8 breakdowns and 3 hematomas, a total of 49 complications, amounting to 32 per cent. This was the highest incidence in complications when compared with the other methods. In the partial closure group we had 3 infections, 5 breakdowns in scar and no hematomas, adding up to 30 per cent complications. In the open packing procedure there was one gross infection and one subsequent breakdown with a 7.5 per cent complication incidence.

It is interesting to note that the 42 cases which developed infections spent an additional 1.093 days in the hospital, or an average of 26 *days* beyond the prescribed six weeks period,[7].

Use of Sulfonamides. We have the records of 27 primary closures in which 5 Gms. of sulfanilamide was introduced into the wound with an incidence of 11 infections and 1 hematoma. This is a 44 per cent incidence. Similarly, when in 124 cases of primary closure no sulfanilamide was employed the incidence was reduced to 23 percent. Others, [12], [13], too, have found the use of sulfanilamide discouraging. Because of this

the introduction of sulfanilamide into the wound has been discontinued. (See Table 7)

Table 7
Incidence of infections with and without the use of sulfanilamide

	No. of Cases	No. of Infection	Percent Infection
Primary Closure With Sulfanilamide	27	12	44
Primary Closure Without Sulfanilamide	124	29	23

Time Loss. As will be noted in Table V, the average time spent in the hospital by the soldiers in this series of cases was as follows:— 27 days in simple incision and drainage, 48 days in the excisions with primary closure, 66.7 days in the excision with partial closures, and 98 days in the excisions with open packing. The total post-operative period for the operative group (283 cases) was 13,026, or an average of 46 days per man. However, when we consider the entire 300 men (there were 17 non-operative cases) the time spent in the hospital increases to 15,531 days or an average of 51.6 days per man. When to these figures is added the known past loss of time of 2,195 days for the 50 men with previous hospitalizations we get a new grand total of man days lost in army hospitals of 17,726 or an average of 59 *days* per man. (See Table 8) For practical purposes we may say that these 300 men had each lost 2*months* of service. Considering the many army hospitals throughout the country and abroad, and the large number of pilonidal cases that they too have been handling, the loss in man power takes on a greater significance than has heretofore been attributed to this condition.

Table 8
Time loss of 300 cases

Number Cases	Total Post-operative Period	Average Number Days	Total Present Hospital Period	Average Number Days	Total Past & Present Hosp. Period	Average Number Days
283	13,026	46				
300			15,531	51.6	17,726	59

SUMMARY

Three hundred consecutive cases of pilonidal sinus are reviewed. Almost two-thirds of these attributed the beginning of their symptoms to some episode in the army.

Fifty of these cases had operations prior to admission to this hospital; one-half cystectomies, the other half incision and drainage.

Two hundred and eighty-three cases in this series were operated upon; 80 had incision and drainage, 151 primary closures, 26 partial closures, and 26 open packing.

Simple incision and drainage required the shortest average post-operative hospitalization period (27 days); excision and open packing the longest (98 days).

The largest incidence in complications (32%) occurred in the primary closure group. Paradoxically, this same group had the shortest post-operative hospitalization period (48 days).

The introduction of appreciable amounts of sulfanilamide into wounds of primary closure carried with it a 44 per cent infection incidence as compared with 23 per cent where none had been used.

CONCLUSIONS

1. Army life predisposes to pilonidal sinus infection.

2. Pilonidal sinus in the soldier constitutes a great problem in the army from the standpoint of the enormous time loss from duty.

3. The trend in the treatment of pilonidal sinus should be conservative. However, in cases where excision is indicated, the primary closure method promises an earlier return to full duty. This procedure is practicable in about three-quarters of the cases coming to surgery.

4. The use of sulfanilamide in any appreciable amount in complete closures carries a high incidence of complications. It should, therefore, not be used.

5. The inability to properly follow up the pilonidal sinus cases in the army greatly reduces the value of this or any other similar statistical review.

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TEAMWORK IN MEDICINE

The Woman's Auxiliary as a Member of the Team

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CHICAGO

It has been suggested that the women of the Auxiliary would be interested in a review and re-evaluation of the professional ethical code for the purpose of better understanding and added inspiration, since all the activities of the Woman's Auxiliary are inherently subject to and should be influenced by the principles of the medical ethical code. Therefore, may we confine our discussion of "Teamwork in Medicine" to those paragraphs from the "Principles of Medical Ethics of the American Medical Association" that seem to be applicable to the doctor's wife and the Auxiliary's functions and activities.

It perhaps is unnecessary to remind you ladies of the Auxiliary, but it is of particular significance that the present day medical code of ethics is based primarily on the enunciation of medical-public relations by Hippocrates, known as the Father of Medicine, in the year 400, B.C.

The present day dictum may be summed up in the first section of Chapter 1 of the "principles":

"A profession has for its prime object the service it can render to humanity; reward or financial gain should be a subordinate consideration. The practice of medicine is a profession. In choosing this profession an individual assumes an obligation to conduct himself in accord with its ideals."

When the principles of medical ethics are fairly well understood and digested by the women of the Auxiliary, it appears logical and obvious that their discretion and judgment will automatically dictate the proper demeanor and course of action the Auxiliary and its individual members should assume when confronted with an issue or problem which might border on a question of violating a medical policy or procedure.

With the object in mind of bringing to your attention some of the "principles" that may well be considered relevant for doctors' wives to become better acquainted with as a guide to their conduct in dealing with medical matters, let us now discuss together a few sections from the "Code".

"Patience and delicacy should characterize all the acts of a physician. The confidence concerning individual or domestic life entrusted by a patient to a physician and the defects of disposition or flaws of character observed in patients during medical attendance should be held as a trust and should never be revealed except when imperatively required by the laws of the state."

The doctor's wife's place on the "team" in connection with her husband's private practice is readily observed by implication. The doctor's wife should fully understand that her husband, as a physician, is obligated under the ethical code to hold in trust confidences concerning individual or domestic life, defects of disposition or flaws of character entrusted by a patient to him and they should never be revealed to anyone except when required to do so in a court under the law.

"The obligation assumed on entering the profession requires the physician to comport himself as a gentleman and demands that he use every honorable means to uphold the dignity and honor of his vocation, to exalt its standards and to extend its sphere of usefulness. A physician should not base his practice on an exclusive dogma or sectarian system, for 'sects are implacable despots; to accept their thraldom is to take away

Read before the Woman's Auxiliary to the Illinois State Medical Society, Chicago, March 20, 1946.

all liberty from one's action and thought.' (Nicon, father of Galen)."

This precept directs our attention to the exalted and lofty ideals promulgated and accepted by the medical profession and with equal emphasis reveals the over all decorum expected of the physician as a member of society and his responsibility to those he may serve. The doctor's wife must gain genuine pleasure and wholesome satisfaction in the realization of her position as a helpmate to a man whose vocational activities are based upon such a high plane of conduct standards.

It is presumed and expected that members of the Auxiliary in all their activities, whether as individuals or as an organized body, will fully sense the dignity and honor of the medical profession, exalt its standards and assist in extending its sphere of usefulness.

"In order that the dignity and honor of the medical profession may be upheld, its standards exalted, its sphere of usefulness extended, and the advancement of medical science promoted, a physician should associate himself with medical societies and contribute his time, energy and means in order that these societies may represent the ideals of the profession."

Faithfulness and encouragement by the doctor's wife may be the "guiding star" to influence active participation of her husband in medical society meetings. Likewise, the lady member of a doctor's family should join the ranks of the Woman's Auxiliary and contribute her time, energy and means in order that the Auxiliary may extend its sphere of usefulness as a public representative of the ideals, policies and procedures of the profession.

"A physician should be an 'upright man, instructed in the art of healing.' Consequently, he must keep himself pure in character and conform to a high standard of morals, and must be diligent and conscientious in his studies. 'He should also be modest, sober, patient, prompt to do his whole duty without anxiety; pious without going so far as superstition, conducting himself with propriety in his profession and in all the actions of his life." (Hippocrates)."

None-the-less important in connection with decorum and propriety is the exemplified demeanor of the women of the Auxiliary.

"Solicitation of patients by physicians as individuals, or collectively in groups by whatsoever name these be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communications, is unprofessional. . . . . It is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other like self-laudations defy the traditions and lower the tone of any profession and so are intolerable. The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct."

A devoted, patient and cooperative wife will do much in assisting her husband to establish a well-merited reputation for professional ability and fidelity.

"Physicians should expose without fear or favor, before the proper medical or legal tribunals, corrupt or dishonest conduct of members of the profession. All questions affecting the professional reputation or standing of a member or members of the medical profession should be considered only before proper medical tribunals in executive sessions or by special or duly appointed committees on ethical relations. Every physician should aid in safeguarding the profession against the admission to its ranks of those who are unfit or unqualified because deficient either in moral character or education."

This paragraph exemplifies purity, valor and justice.

"Experience teaches that it is unwise for a physician to treat members of his own family or himself. Consequently, a physician should always cheerfully and gratuitously respond with his professional services to the call of any physician practicing in his vicinity, or of the immediate family dependents of physicians."

Unselfish gratuitous professional service, one to the other, illustrates a bond of true devotion and genuine friendship.

"In serious illness, especially in doubtful or difficult conditions, the physician should request consultations. In every consultation, the benefit to be derived by the patient is of first impor-

tance. All the physicians interested in the case should be frank and candid with the patient and his family. There never is occasion for insincerity, rivalry or envy, and these should never be permitted between consultants."

It should be ever kept in mind that the patient's interests and welfare supersede all other considerations.

"The physician, in his intercourse with a patient under the care of another physician, should observe the strictest caution and reserve; should give no disingenuous hints relative to the nature and treatment of the patient's disorder; nor should the course of conduct of the physician, directly or indirectly, tend to diminish the trust reposed in the attending physician. In embarrassing situations, or wherever there may seem to be a possibility of misunderstanding with a colleague, the physician should always seek a personal interview with his fellow."

Lay-education and public goodwill can be obtained and enhanced only when professional misunderstanding is kept within the ranks of the profession and is amicably resolved by and between the physicians involved. Likewise, the Auxiliary in its intercourse with the public should observe caution and reserve in situations that might tend to diminish the trust reposed so graciously in the medical profession.

"A physician should avoid making social calls on those who are under the professional care of other physicians without the knowledge and consent of the attendant. Should such a friendly visit be made, there should be no inquiry relative to the nature of the disease or comment upon the treatment of the case, but the conversation should be on subjects other than the physical condition of the patient."

To achieve teamwork in harmony with this ethical stipulation, Auxiliary members can see the wisdom of adhering to the admonitions as strictly as is expected of their husbands.

"When a physician does succeed another physician in the charge of a case, he should not make comments on or insinuations regarding the practice of the one who preceded him. Such comments or insinuations tend to lower the esteem of the patient for the medical profession and so react against the critic."

Criticism is a tree of unfortunate fruitage. Criticism of itself assumes superiority and often reflects as a boomerang the faults and failures of one's own deeds.

"Whenever there arises between physicians a grave difference of opinion which cannot be promptly adjusted, the dispute should be referred for arbitration to a committee of impartial physicians, preferably the Board of Censors of a component county society of the American Medical Association."

They may never arise, but in the event of unadjustable differences of opinion between officers of the Auxiliary, in connection with policies and procedures to be adopted, the problem could well be referred to the Medical Advisory Committee.

"When a patient is referred by one physician to another for consultation or for treatment, whether the physician in charge accompanies the patient or not, it is unethical to give or to receive a commission by whatever term it may be called, or under any guise or pretext whatsoever."

"It is unprofessional for a physician to dispose of his professional attainments or services to any lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit a direct profit from the fees, salary or compensation received to accrue to the lay body or individual employing him. Such a procedure is beneath the dignity of professional practice, is unfair competition with the profession at large, is harmful alike to the profession of medicine and the welfare of the people, and is against sound public policy."

This "principle" is presented for your general information in connection with violation of the ethical code by physicians granting or accepting commission or profit to or from sources extraneous to their recognized ethical private practice of medicine on the free-for-service basis.

"Physicians, as good citizens and because their professional training specially qualifies them to render this service, should give advice concerning the public health of the community. They should bear their full part in enforcing its laws and sustaining the institutions that advance the interests of humanity. They should cooperate especially with the proper authorities in the administration of sanitary laws and regulations. They should be ready to counsel the public on

subjects relating to sanitary police, public hygiene and legal medicine."

One can see from reading this "principle" that it is the ethical duty of physicians to acquaint the public by all available means with scientific and reliable health information in the interests of public welfare. Lay-education programs on health and sanitation subjects, sponsored by the Auxiliary, are in direct line with this ethical dictum. Medicine is not organized for shorter hours and greater pay, *but* rather to become better equipped for service to mankind and the advancement of medical science.

"While the foregoing statements express in a general way the duty of the physician to his patients, to other members of the profession and to the profession at large, as well as of the profession to the public, it is not to be supposed that they cover the whole field of medical ethics, or that the physician is not under many duties and obligations besides these herein set forth. In a word, it is incumbent on the physician that under all conditions, his bearing toward patients, the public and fellow practitioners should be characterized by a gentlemanly deportment and that he constantly should behave toward others as he desires them to deal with him. Finally, these principles are primarily for the good of the *public,* and their enforcement should be conducted in such a manner as shall deserve and receive the endorsement of the community."

Equally important is the recognition by the Auxiliary and its membership that the comments herein set forth do not cover the whole field governing actions and decorum. The Doctor's Ladies should ever keep in mind that these principles are primarily for the good of the public and adherence to them in the course of Auxiliary activities should be performed in such a manner as shall deserve and receive the endorsement of the community.

It can now be seen that in all Auxiliary dealings with the public on matters designed to further lay-education in connection with the practice of medicine, the policy and procedure should in every respect be conducted within the limits imposed by the professional ethical code.

Naturally, the ethical code principles apply to the Auxiliary *only* when its activities are related to the sphere of professional practice of medicine.

Loyalty, harmony and teamwork should be the Auxiliary's aim and accepted as its duty and obligation.

Whenever in doubt with respect to any contemplated Auxiliary activity, or lay-education project that might even approach violation of the code or result in embarrassment to constituted medical policy, the proper procedure would be to seek counsel from the Auxiliary's Advisory Committee.

May we now repeat together your LOYALTY PLEDGE:

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

PSEUDO-SPIROCHAETES IN BLOOD

LT. COLONEL G. HOWARD GOWEN*
Medical Corps, Army of the United States

We became interested in pseudo-spirochaetes while studying the epidemiology of infectious hepatitis in North Africa during the fall and winter of 1943-44. With the occurrence of large numbers of cases of epidemic hepatitis the attention of many laboratory workers was unavoidably focused on darkfield examinations of blood for diagnostic purposes. There was considerable preliminary confusion due to the finding of artifacts which simulated spirochaetes. The existence of such objects has been known for years[1], but most of us probably have had little practical experience with them until the recent outbreak of jaundice became evident. Since a large number of laboratory observations were made by us, it was thought that a capitulation of our findings might be pertinent and apropos at this time, and of value to those who may have yet to personally encounter these deceptive entities.

The appearance of these pseudo-spirochaetes is depicted schematically in Figure 1. The drawings have been made as nearly as possible to scale with the diameter of the red blood cells representing 8 microns. The forms shown are representative of the different types seen in 400

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Figure 1.

A. Evaginations from red blood cells.
B. Filamentous forms attached to red blood cells.
C. Free floating forms showing branching, beading, striations, and spiral characteristics.

darkfield examinations of blood serum. They varied in length from approximately 4 to 20 microns, and in width from 0.25 to 0.5 microns. Some reflected light well and appeared quite silvery while others were shadowy in outline. In general they were homogeneous with no definite structure. Some, however, had a beaded appearance and others seemed to possess striations. Practically all had bulbous ends and sometimes the ends were of a hooked appearance. There was no true spontaneous motility. Movement was always in the direction of the flow of liquid under the cover slide. There was a wavy type of undulation, and rotation was of common occurrence. Occasionally forms were seen having spirals of an irregular nature. When this occurred the pseudo-spirochaete would twist and turn in a most uncoordinated manner.

Attempts to stain these bodies either by Giemsa or the Fontana-Tribondeau impregnation method were generally unsuccessful. This may have been due to distortion which rendered them unrecognizable. When a typical form was seen it had much the same appearance as under the darkfield — homogeneous, no definite structure, bulbous ends, and definitely not coiled.

These forms are consistently seen in cases of jaundice, cases in the prodromal stages before jaundice, and in cases that do not go on to jaundice. They apparently have no relationship directly to the degree of jaundice, and the numbers present vary greatly in cases of similar severity. As the cases convalesce these forms decrease markedly in number or disappear.

These forms may be found in normal serum, but not as consistently, and when present they are not usually as numerous. In a study of 176 blood sera from apparently normal individuals we found 20 or 11 per cent positive. In 15 of these in fluid under the cover slip we found only from one to four. In the other five they were more numerous. We have also at times seen them in serum from penile lesions.

We did not limit our observations to humans in regard to these forms but also studied the serum of lower animals. We found them in guinea pigs injected with blood or serum from human cases of jaundice, and also in normal guinea pigs. We found them in injected and normal white mice. They were present in tame rabbits and in wild rats. Occasionally there would be a negative but the vast majority were positive. We did not find them in serum from a mule and a sheep, but this is not significant since an insufficient number of animals was used.

Some observations on the properties of these forms in serum were that centrifuging apparently does not concentrate them; refrigeration itself does not affect them; incubation leads to a rapid disappearance as a rule; standing at room temperature they disappear slowly. In sterile serum not refrigerated, we found them up to eleven days. In non-sterile serum, not refrigerated, they disappeared usually in four to five days.

Our studies support the belief that they are in some way associated with changes in the red blood cells. If blood is drawn in the manner prescribed for a red blood count, and before shaking the pipette, a drop is examined under darkfield, many of the wavy, shadowy forms are seen attached to the red blood cells. They are, however, apparently more numerous in jaundice cases than in normals. If a similar examination is

made after shaking the pipette, these forms are no longer visible. We have not seen the brighter appearing forms, however, under these conditions. In the presence of white cell counting fluid we found none of these forms in jaundice cases or normals.

While most of these forms when attached to red blood cells appear as slender bright or faint appearing wavy filaments, not uncommonly we have noted what appeared to be an evagination of the red cell at a certain point. These evaginations have been short and relatively thick in some instances, and longer and more slender in others (See A in Figure 1). It is thought that the longer filaments may be extensions of these primary evaginations, and that they eventually separate producing the wavy pseudo-spirochaetes. If this theory is correct then some change in the surface tension must occur on the surface of the red cell permitting the extrusion of some of the cellular contents at a certain point which goes through the steps cited above eventually becoming detached filaments. That these filaments are the result of the loss of cellular contents by some of the red cells is further suggested by the fact that normal and diminutive sized red cells are commonly encountered which do not reflect light in the manner of the normal cell and which appear more or less as "ghost" forms.

In serum it is not uncommon to see these forms attached to red blood cells. Not infrequently they appear to contract and then break off transversely, but not into particles necessarily of equal size. After this separation they go through active gyrations, show coiling and at this time more nearly simulate true spirochaetes. In blood cultures we have found them attached to red cells after two weeks incubation.

Apparently there is something about the presence of icterus that favors the development of these pseudo-spirochaetes. This has also been observed by Kuzell[2]. In addition he noted they were more numerous in a miscellaneous group of acute febrile patients than in a group of afebrile surgical convalescents.

SUMMARY

1. We have presented the observed characteristics of pseudo-spirochaetes found during 400 darkfield examinations of blood serum.

2. These artifacts are not only present in the blood of humans, but also occur in that of guinea pigs, white mice, tame rabbits and wild rats.

3. Our studies lead us to believe that these free floating forms result from an extrusion of cellular contents of red blood cells which extends into a filamentous form and subsequently becomes detached.

4. An increase above normal in the bilirubin content of the blood seems to favor the development of these artifacts.

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Acknowledgement is made of the valuable technical assistance of F. C. Heneman, Jr., Technician Fourth Grade.

GRANULOCYTOPENIA FROM THE COMBINED USE OF THIOURACIL AND SULFONAMIDES

SAMUEL G. TAYLOR, III, M.D.

CHICAGO

Slight leukopenia with relative lymphocytosis is not an unusual finding in a patient to whom thiouracil is being administered. However, agranulocytosis apparently is uncommon and occurs less frequently now that smaller doses of the drug are given. Kahn[1] has recently reported a case of fatal agranulocytosis in a patient receiving thiouracil. Ashwood[2] reported a case of neutropenia in a patient given sulfamerizine during the administration of thiouracil. We have recently observed this type of reaction when sulfadiazine was given along with thiouracil:

REPORT OF CASE

A 49 year old woman, who had had a thyroidectomy for exophthalmic goiter in 1937, developed an enlargement of the remaining thyroid tissue in the left lobe and signs of thyrotoxicosis in January 1943. The B.M.R. was +23%. With iodine the symptoms of thyrotoxicosis disappeared and the B.M.R. returned to normal but the thyroid tissue increased in size and became unsightly. On omission of iodine her symptoms recurred and the B.M.R. rose to +25%. Thiouracial 0.4 Gm daily was started May 22, 1944. This was followed by a drop in B.M.R. and disappearance

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of symptoms of thyrotoxicosis. The W.B.C. fluctuated between 4,300 and 5,850 per cu. mm. and the differential showed a slight lymphocytosis. On August 14, 1944 thiouracil was omitted as the B.M.R. was —10%, the palpable thyroid tissue had decreased to about 1/3 its former size and the patient felt normal.

She returned November 1, 1944 with recurrence of symptoms of thyrotoxicosis. The B.M.R. had risen to +18%. Thiouracil 0.1 Gm. once a day was started. In the weeks following the B.M.R. dropped to normal and the W.B.C. remained between 4,000 and 4,500 per cu. mm. She entered the hospital January 20, 1945 because of a thrombophlebitis of the left leg that had been present for one week. She had been taking 0.1 Gm. thiouracil daily since November 1, 1944. The same dose of thiouracil was continued and sulfadiazine 1 Gm. every 4 hours was started. Dicumerol 0.1 Gm. daily was also given. The following day the W.B.C. were 4,500 but the second day they dropped to 2,300 per cu. mm. with 33% segmented neutrophils, 56% lymphocytes and 8% monocytes. The thiouracil and sulfadiazine were omitted, the total of the latter given being 10 Gm. Twenty-four hours after omission of both drugs the W.B.C. were 2,900 per cu. mm. with 5% stab forms and 35% segmented neutrophils. There later the W.B.C. had risen to 5,900 with 60% seg- for the next five days and the patient was dismissed from the hospital without medication. Two weeks was no further change in the total or differential count mented neutrophils, 4% juveniles, 4% stab forms, 30% lymphocytes and 2% monocytes. Thiouracil .1 Gm. was restarted February 13, 1945 and the white blood count and differential has remained normal since despite continual administration of the drug in the above dose.

CONCLUSION

The administration of sulfonamides to a patient who is taking Thiouracil may increase the danger of producing granulocytopenia.

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TUBERCULOSIS WINS THE PEACE

Austria — There were 3,848 new cases of tuberculosis in Vienna during the last six months, compared with 3,355 in the same six months of the previous year and 2,148 deaths in this period compared with 1,301 in the 1944 period from this cause.

Czechoslovakia — Czechoslovakia has more than 180,000 tuberculosis patients. The most serious problem is tuberculosis among people about 40 years of age, the mortality at that age being high. This is attributed to the fact that so many parents surrendered their rations to children during the war.

France — *Tuberculosis has become the greatest* single disease problem of France, and the possible *measures of prevention are considered backward and* inadequate.

Greece — According to data recently compiled by UNRRA 95 per cent of the Greek population, reported to be about 7,000,000, suffer from malnutrition. This means a prevalent susceptibility to diseases, particularly those that are the country's greatest scourges — tuberculosis and malaria. It means too a serious decline in the birth rate and a rise in infant mortality boding ill for the country's future.

Hungary — Venereal disease is the most important health problem in Hungary followed by tuberculosis and rickets in children. The infant mortality rate, which was 13.1 per cent in 1938, has risen to 30 per cent.

Italy — The worst potential problem is typhus; the worst actual problems are tuberculosis and infant mortality. Moreover, as throughout a world tainted by war, venereal disease is a grave complication.

For the vast majority of Italians, there is generally enough — but never too much — to eat. And, since it is a general truth that the curve of tuberculosis follows the curve of living costs in Italy, there is a very definite health factor in the chaotic economy that decrees that a pound of sugar costs $2 on the black market, which is the only place where it can be obtained.

When it comes to the statistics of disease, tuberculosis is possibly most alarming. From 1940, the *death rate has increased steadily throughout 1944.* Last year an average of more than ten persons died of *tuberculosis every day in Rome.* The rate was 119 per 100,000 population in 1940 and 253 per 100,000 last year.

The explanation, here as elsewhere, is lack of proper foods, notably fats and milk, and unsatisfactory living conditions in general.

Netherlands — The number of tuberculosis patients soared during the war. Available statistics show a rise in deaths caused by this disease of 300 per cent during the first six months of 1945. In January this year the number was still double that of 1940.

Turkey — According to most medical opinion tuberculosis, malaria and venereal diseases constitute the main scourges affecting Turkey. Sanatoria have been built in recent years where up-to-date treatment is administered, but more are needed.

The above reports, considered substantially correct, were taken from the New York Times of March 11, 1946. They clearly show that among the victors of both war and peace — tuberculosis unfortunately has won itself a place.

Physical Medicine Abstracts

John S. Coulter, M.D.

THE VALUE OF MASSAGE IN *RHEUMATOID ARTHRITIS*

Frank Hopkins, M.D., Hot Springs, Virginia

In VIRGINIA MEDICAL MONTHLY, 73;2;62
February, 1946

The myositis that accompanies chronic rheumatism and chronic gout is characterized by a generous cellular exudate which soon produces induration and requires much treatment for its dissipation; on the contrary, in the myositis of rheumatoid arthritis, there is a more or less noncellular exudate, which is circumscribed and more easily dissipated. The muscles seem especially sensitive and with the slightest infiltration are subject to painful spasm. Pain is a great factor and probably the greatest factor in undermining the patient's health and morale. Skillful and understanding massage will keep the pain in abeyance and thereby add the greatest boon to the patient's welfare.

As long as general massage is ordered without specific instructions to the operator relative to the pathology, massage will not have the place in the doctor's armamentarium that it deserves.

If any muscle is found acutely inflamed, massage is postponed and moist heat is applied.

The form of massage used to dissipate the infiltrated areas is classified as friction or pressing and consists of the use of the tips of the three middle fingers or thumb, making gradually increasing pressure and applying circular movement. This is kept up until the operator feels the tissues give or relax, which means the treatment is effective. Whether the operation is to be carried further at this seance will depend upon the judgment of the operator. At this stage, it may be desirable to finish the treatment with effleurage and kneading (petrissage).

Proper massage in rheumatoid arthritis will help to keep the muscles free of exudates and thereby lessen pain and help to prevent contractures and make for a longer life of activity and freedom from complete invalidism.

ORTHOPAEDIC LESSONS OF THE WAR

W. Rowley Bristow, F.R.C.S.
Late Brigadier, Consultant in Orthopaedic Surgery to the Army

In JOURNAL OF THE ROYAL ARMY MEDICAL CORPS, 85;6;275
December, 1945

Many surgeons are still not convinced that early knee movement is necessary in treating a fractured femur, but there can be no two opinions about its value in the management of injuries of the fingers and hand and, to a less extent, the foot.

There has been a great advance in treatment, both in the British and American Armies, from the appreciation of the fact that a splinted hand is likely to become a stiff and useless hand. It was common in the early days of the war to meet with hands immobilized in plaster following a fracture of a metacarpal or a phalanx. It was routine to immobilize the foot and leg following a fracture of the os calcis.

A fractured third metacarpal, for instance, splinted as it is by a normal bone on either side, requires protection but surely not an arm and hand and fingers encased in plaster of Paris.

Yet this was a common phenomenon in the early days of the war.

The gospel of early movement for the hand and fingers was finally recognized and its appreciation has saved many limbs from long hospitalization and from disaster. It is one of the lessons which the orthopaedic surgeons preached incessantly. In some hospitals when a patient left with his arm in plaster following an open fracture of the elbow, written on his plaster were the words: "Keep your fingers moving."

It should be put on record that the masseuses who served overseas played a big part in helping to carry out this policy of early movement and rehabilitation. The massage corps did grand work. They stimulated and encouraged patients to try to use their muscles and joints in a way which the overworked M.O. could not do, and just as the Nursing Sisters are deservedly praised for their work in forward areas, so should the physiotherapists, work be equally acknowledged.

Early movement improved the results of the os calcis fracture, never so common as in this war as the result of mine explosions. In the Centres, plaster fixation was generally given up and replaced by rest with the foot elevated on a Braun's frame for four weeks, with the fracture reduced as far as possible, and movement of the forefoot and midtarsus encouraged. No weight-bearing for some sixteen weeks became the standard method. Under the fixation scheme the disability of the fracture was complicated by the adhesions and joint fixation of the whole of the tarsal joints.

CIRCUMSCRIBED POST-TRAUMATIC OSTEOPOROSIS OF THE LOWER ENDS OF THE RADIUS AND ULNA

Joseph Buchman, M.D.

In THE AMERICAN JOURNAL OF SURGERY, 71;2;272
February, 1946

It therefore appeared to the author that the patient was suffering from a diffuse post-traumatic osteoporosis of the entire carpus and adjacent bone structures superimposed upon a previously existing circumscribed post-traumatic osteoporosis of the semilunar bone, otherwise known as Kienboch's disease.

Immobilization in a circular plaster of Paris bandage from the metacarpophalangeal joints to the elbow was advised and applied from time to time over a period of eighteen months from the date of the accident.

Radiographic examination made on April 28, 1942, demonstrated that the diffuse punctate osteoporosis had disappeared.

Gradual mobilization of the wrist and physiotherapy were advised and instituted. A further roentgenographic study two years after the accident demonstrated the above described changes more clearly. Clinically, however, there were residual changes such as pronounced limitation of motion, pain on extremes of motion, tenderness and weakness which were indicative of arthritic changes. The prognosis was therefore poor even though the diffuse post-traumatic osteoporosis had subsided.

HOW TO BRING BENEFITS OF PHYSICAL MEDICINE TO YOUR OWN SMALL TOWN

John S. Coulter, M.D., Chairman, Council on Physical Medicine, A.M.A., and Howard A. Carter, Secretary, Council on Physical Medicine, A.M.A.

In THE MODERN HOSPITAL, 66;2;65
February, 1946

The quality of physical medicine administered is dependent on the personnel of the department, which should be under the supervision of a physician. Our experience indicates that this service is most satisfactory when it is entrusted to a specialist, e.g. a member of the Society of Physical Medicine, a national organization of physicians specializing in this field.

In our opinion the best technician for hospital service is one who has had nurses' training and nursing experience. The suggestion has been made that a physical therapy technician might also serve as x-ray and medical laboratory technician. This combination requires training in three separate technical specialities and thus entails a long period of preparation. If there is not sufficient demand for physical therapy in a small community hospital to occupy the full time of a physical therapy technician, it would be preferable to employ one who has had a nursing background so that she can do part-time nursing.

The physical therapy technician must be thoroughly trained because at times she may have to

administer physical agents according to oral directions given by the consulting specialist. Skill and service of this kind are possible only if she is well qualified and paid a salary equal to that which she can command in the city.

THE FUNCTIONAL ANATOMY OF THE SHOULDER GIRDLE

Daniel P. Quiring, Ph.D., and Erna L. Boroush, Cleveland

In THE ARCHIVES OF PHYSICAL MEDICINE, 27;2;96
February, 1946

1. The shoulder girdle is the result of a long evolutionary process. In each Vertebrate class it adapts the animal for particular functions.

2. The girdle is associated with the axial skeleton through the sternoclavicular articulation. The clavicular and scapular parts are associated through the acromioclavicular articulation.

3. Muscles of the girdle receive their innervation from the eleventh cranial nerve and from the cervical and brachial plexuses.

4. The arterial supply to the girdle is furnished by branches of the axillary artery.

5. The muscles activating the girdle fall into three natural groups: (a) those uniting the girdle with the trunk, (b) those uniting the girdle with the upper arm, (c) those uniting the scapula with the forearm.

6. Injuries of the shoulder girdle occur most frequently at the clavicle. Fracture of the clavicle is more common than dislocation.

THE THERAPEUTIC VALUE OF EARLY PHYSICAL ACTIVITY IN RHEUMATIC FEVER
PRELIMINARY REPORT

Lt. Colonel Harold F. Robertson, M.C., A.U.S., Major Ralph E. Schmidt, M.C., A.U.S., and Captain William Feiring, M.C., A.U.S., Orlando, Florida

In THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, 211;1;73
January, 1946

This paper is a preliminary report of observations made on 200 patients on whom the diagnosis of acute rheumatic fever was made by the clinical and laboratory criteria recommended by the Army Air Forces. From this study we have been impressed by two things: first, the high incidence of anxiety neuroses, often to a disabling degree; and second, the fact that prolonged bed rest was not necessary for an uncomplicated rapid recovery. Furthermore, early ambulation has greatly reduced the incidence and severity of the anxiety neuroses. The usual clinical and laboratory criteria for judging activity of the disease were not regarded as contraindications for starting early ambulation — the patient's physical comfort was the determining factor. Four case reports are included which illustrate our present program.

We recognize that this study does not warrant any dogmatic conclusions at this time; nor do we advocate indiscriminate physical activity. Nevertheless. it does invite attention to reevaluation of the currently accepted policy of prolonged bed rest, with its disadvantages, in the treatment of acute rheumatic fever.

TYPICAL HEADACHE OF ESSENTIAL HYPERTENSION: ETIOLOGIC CONSIDERATIONS AND REPORT OF NEW FORM OF THERAPY

A. A. Steiner

In Medical Annals of District of Columbia, Washington — p. 531
14:531-582 (Dec.) 1945
Abstracted in
THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 130;11;745
March 16, 1946

On the premise that recumbency seems to favor production of the cephalalgia, Steiner instructed patients to elevate the headposts of their bed on 10 inch high blocks. Of 12 patients in whom elevation of the head of the bed during sleep was employed, 10 obtained dramatic relief of their complaint. Four patients required oral ergotamine therapy and obtained complete relief after a week's course of medication. In only 1 case was there partial failure. This patient was unable to sleep with more than 5 inch elevation of the head of her bed. Nicotinic acid was prescribed in several cases on the hypothesis that this headache, like migraine, is of a primary vasoconstrictor type. It was without value. Phenobarbital and thiocyanates were used prior to institution of the present therapy.

POSTURE

A. B. Appleton, M.D., Professor of Anatomy, University of London; Professor, Royal Academy of Arts

In THE PRACTITIONER, 156;931;55
January 1946

No attempt can be made here to embark on the wide subject of correction, i.e., of remedial treatment. It must suffice to draw attention to a few salient points. The primary site of disturbance must be ascertained. "Round shoulders" as a rule consist mainly in an undue flexion in the upper part of the thoracic spine. Again, the constant adoption of some posture may lead to changes in the degree of passive insufficiency in muscles; thus the use of high heels leads to an increase of the passive insufficiency of the gastrocnemius muscles, and this may in turn produce strain on the arches of the foot if the high heels are suddenly discarded. If the shoulders are allowed to fall forward the pectoralis muscles shorten, and if attempts are then made to assume a "good" posture without correcting this secondary defect there will be a development of an unusual posture elsewhere, e.g., a lordosis or even a pronation of the foot. If a subject with a long curved back tries to straighten himself without guidance he will bring his head up by a forward displacement of the pelvis and a backward sway above the pelvis. Thus an important problem in the correction of postural deviations consists in avoiding the development of still other postural disturbances.

THE WEAK BACK

Colonel A. B. Walter, R.C.A.C.C.
Consultant in Medicine, D.G.M.S. Directorate, Ottawa

In THE CANADIAN MEDICAL ASSOCIATION JOURNAL, 54;3;255
March, 1946

One type of chronic strain is worthy of separate identification; it is the cause of "postural back-ache" and is of psychic background with the asthenic posture as a physical expression. The trunk is allowed to slump habitually into the position of least effort, the abdominal wall is used unduly for respiratory excursion and its muscles are kept relaxed for this purpose; the slack rectus fails to hold up the pubic arm of the pelvis and lumbar lordosis, often betokened by a "sway back", is the result. A lowered threshold of capacity and undue tendency to lumbar strain is the outcome; this may be a source of pain from no more effort than walking, or still more from continued standing, and its diagnosis is apt to be overlooked because no localized tenderness is found in the back. Its distinction from other types of strain is important because while they are treated by rest this is amenable to treatment on opposite principles. Provided that the psyche is yet plastic, it entails correction of posture and of breathing habits, and restraining of the recti abdominis to properly elevate the pubic bones and lever back the lumbar spine into some semblance of straightness. For mechanical reasons such abdominal exercise should be given in the supine position.

Our present treatment of fibrositis consists in muscular relaxation by heat and rest in the acute stage, heat and directive massage in the chronic; and there seems little doubt that attainment of muscular fitness, whatever that is, increases the resistance of tissues to inroads of the disease.

ELECTROSHOCK CONVULSION THERAPY

W. E. Olson, M.D., Fort Meade, South Dakota

In THE JOURNAL LANCET, 66;3;71
March, 1946

One risk of electroshock therapy is that of fracture of one or more bodies of spinal vertebrae. This risk is very much lessened when the patient is carefully placed and restrained during the convulsion.

Electroshock therapy has been used rather extensively at Fort Meade Hospital. The first treatment was given on June 26, 1945, and since then 38 patients have been treated or are under treatment. A total of 739 treatments have been given, with 649 grand mal and 90 petit mal reactions.

In summary, from our experience with electroshock therapy at Fort Meade we are definitely of the opinion that it is a valuable aid in the treatment of psychiatric cases. In a number of cases the result has been very gratifying.

News of the State

PERSONALS · COMING EVENTS · MARRIAGES · DEATHS

ADAMS COUNTY

The Woman's Auxiliary of the Adams County Medical Society entertained at a luncheon at the home of Dr. and Mrs. J. F. Ross to honor the wives of the medical society members who have returned from service during the war.

BOND COUNTY

J. D. Chittum of Sorento was elected president of the Bond County Medical Society at the annual meeting which was held April 23rd. K. B. Luzader was re-elected as secretary-treasurer.

CARROLL COUNTY

Ralph E. Speer, formerly of Chicago, has opened an office for the practice of medicine in Mt Carroll. He served in the army three years and has been recently discharged with the rank of major and has completed a three-months refresher course at the University of Illinois.

CHAMPAIGN COUNTY

James E. Blades of Sidney was married to Miss Mary Alice Wack of Mansfield on New Year's Day. Dr. Blades was released from the army medical corps as a lieutenant colonel upon his return from three years' service in the Pacific area.

CHRISTIAN COUNTY

Tom J. Meek, who was recently discharged from the armed service with the rank of captain, has moved to Taylorville and is now associated with W. A. Monaghan in the practice of medicine and surgery.

COLES COUNTY

John Alexander who served as a captain in the Medical Corps during the war and recently was discharged, will resume his practice of medicine in the county seat.

Dr. and Mrs. J. G. Baker returned to Mattoon after spending the winter in Florida. Dr. Baker has resumed his practice of medicine.

COOK COUNTY

The Chicago Urological Society held their annual meeting on May 23rd at the Palmer House. James W. Merricks of Chicago, Robert D. Perkins, Moline, and Reed M. Nesbit, University of Michigan, were speakers.

Lt. Col. Vincent Paul Graham, who was chief of x-ray services at Camp Grant, Vaughan General Hospital and Regional Hospital at Fort Ord since 1942, has been appointed assistant professor of roentgenology at the University of Chicago.

Elmer A. Vorisek, addressed a special session of the Minnesota Academy of Ophthalmology and Otolaryngology at the Ninety-third Annual Session of the Minnesota State Medical Association held at St. Paul, Minnesota, on May 20, 1946. He spoke on "Evaluation of the Newer Therapeutic Agents in Ophthalmology."

M. Herbert Barker addressed the General Session of the Texas State Medical Society on May 8th. His subject: "Some Uses and Abuses of the Thiocyanates." On the following day he spoke before the Section on Medicine on "Infectious Hepatitis."

Earl E. Kleinschmidt, director of the Tuberculosis Institute of Chicago and Cook County, has been appointed associate professor of bacteriology and public health on the faculty of the University of Illinois College of Medicine.

Malcolm T. MacEachern, president-elect of the Chicago Medical Society, has been reelected chairman of the Tri-State Medical assembly.

Charles J. Smith and Hugh G. Bridegroom have returned to Evanston to practice medicine after discharge from the medical corps of the armed forces.

Maurice D. Sachnoff who was recently discharged from the army having served for three years as an eye, ear, nose and throat specialist, has taken over the practice of the late J. H. O'Neil.

Francis L. Lederer has received a citation and commendation ribbon from the Navy Secretary James Forrestal for outstanding performance of duty. He served as a captain in the naval reserve.

Herbert S. Sarnoff has resumed the practice of medicine in the Lawrence-Kimball Medical Center, Chicago after over three years' service as a commander in the navy.

Jack H. Raider, former major, returned recently following almost five years' service in the army and has opened an office in Chicago on Irving Park Boulevard.

A plastic artificial eye clinic, the second of 16 the Veterans' administration plans to establish, has been opened at the Hines Veterans Hospital under the direction of Maj. Robert E. Stewart, Washington, D. C.

Irvin C. Winter, a major in the army medical corps until his separation from the service in March, has been appointed director of clinical research for G. D. Searle & Co., Chicago Pharmaceuticals manufacturer.

Lester K. Leserman, released from the army after four years' service, has opened an office for general practice on Chicago's north side.

Albert Wendorf, who served overseas for two and one-half years with the army medical corps, recently opened an office on Lawerence Avenue, Chicago.

Paul Bedinger, who served for four years with the army medical department, has been released from service and has returned to Evanston to continue the practice of internal medicine.

Palmer Good, Oak Park, has returned to civilian practice after 41 months service with the army air corps.

Robert C. Borrowman of Austin has resumed his practice as a physician and surgeon after three and one-half years in the army medical corps.

Herbert W. Korngold, recently discharged from the army medical corps after 20 months' service overseas, has opened an office on Chicago's north side.

Major John M. Staron of Chicago, who has been a patient at the Schick General Hospital for the past seven months, is now on terminal leave and will soon resume practice. He served overseas for 20 months and was awarded the Bronze Star Medal for meritorious service.

M. A. Perlstein visited the Dowling School for Crippled Children in Minneapolis on April 23rd at which time he addressed the Minnessota Association for the Crippled. On May 23rd he participated in the Associate Group Meeting of the National Conference of Social Work speaking on "The Management of Cerebral Palsy."

Roger A. Harvey of Strong Memorial Hospital, Rochester, New York, has been appointed professor and head of the Department of Radiology of the University of Illinois College of Medicine in Chicago.

Ray E. Brown, assistant superintendent of the University of Chicago Clinics, has been appointed to succeed Dr. G. Otis Whitecotton as superintendent.

Two new appointments to the medical staff of the Presbyterian Hospital have been made: Douglas A. MacFadyen, graduate of the Toronto Medical School, for biochemistry, and George M. Hass of Harvard Medical School, in charge of the department of pathology.

Edmund Jacobson of Chicago was invited to address the New York Academy of Science, Psychological Division, on "Electrical Measurements of Mental Activities" at the meeting on May 20th.

The National Gastroenterological Association this year resumes its annual scientific sessions with a three day convention in New York City on June 19, 20, 21. Two Chicago doctors, M. Herbert Barker and Max Thorek will be among those presenting papers.

The Post-Graduate Committee of the Illinois State Medical Society sponsored a conference at Bloomington, Illinois, on June 20th for physicians of central Illinois. Doctors Robert S. Berghoff, Louis R. Limarzi, William J. Pickett, Edward Allen, Leander Riba, James J. Callahan of Chicago, and Harold C. Lueth of Evanston are among those presenting papers.

DEWITT

Drs. H. L. Meltzer, W. R. Marvel, Sidney A. Sinow and Owen W. E. Nowlin have returned from the service and are again in private practice. Drs. L. P. Bunchman, H. D. Seely and Carl Sandburg are out of the service but have located elsewhere. Dr. Keith Rhea is still in

post graduate work and expects to return to private practice in Clinton about the middle of July.

Dr. Charles W. Carter is away on a vacation and a well earned rest; we understand he expects to be gone until some time in July.

Dr. C. S. Bogardus has returned from a vacation in the south and his month's rest has been beneficial to him it seems as he is hard at work again.

The new officers for our society for the year are as follows: Pres., Dr. H. L. Meltzer, Vice Pres., Dr. W. R. Marvel and Sec.-Treas., W. R. Marshall.

We presume that the abundance of rainy weather is the reason that we have not had any complaints among the doctors about sore backs from garden work.

There is a movement on foot and several meetings have been held with reference to establishing health district for DeWitt and Piatt counties.

DU PAGE COUNTY

Arthur S. Webb was recently elected president of the Illinois Tuberculosis Association at the annual meeting of that organization held in Peoria.

HENRY COUNTY

Frederick J. Stewart has resumed his practice in Kewanee after returning from service in the navy. He has rented a suite of rooms in the Baker Building.

JACKSON COUNTY

Two Murphysboro physicians are taking advanced courses in certain phases of their profession: J. P. Winn has gone to St. Louis to study x-ray and gastro-intestinal diseases and H. H. Rodewald has gone to Rochester, Minnesota, for advanced knowledge of obstetrics and gynecology.

Carbondale physicians are planning to set up a cancer treatment unit at Herrin Hospital. L. J. Brown, John S. Lewis, John B. Taylor and Jack Barrow have announced plans to buy the hospital.

JERSEY COUNTY

H. E. Wuestenfeld, Wood River physician, has come to Jerseyville to be associated with Robert G. Mindrup. Dr. Wuestenfeld served in the navy in the Pacific area for three years.

KNOX COUNTY

John A. Bowman who served as a major in the army Medical Corps for four years has opened new offices in Abingdon where he is resuming the practice of medicine.

LAKE COUNTY

Comdr. Walter Wm. Dalitsch of Great Lakes, Illinois, gave a program at the Annual Medical Institute held April 10th at the Illini Community Hospital of Pittsfield, Illinois, on "Acute Infections, Cysts and Fractures of the Jaws." On April 11th, he presented a paper on "Oral Manifestation of Systemic Disturbances."

LA SALLE COUNTY

LaSalle County Medical Society had an interesting annual meeting on April 25th with entertainment by Bob Hall, newsreel photographer who showed a number of films he had taken in Japan.

The medical society held a scientific meeting on May 9th with Doctors Donald Ries and Edward A. Piszczek as speakers.

LEE AND WHITESIDE COUNTIES

The doctors of Lee and Whiteside county medical societies held a joint meeting on April 25th with H. Necheles of Chicago as speaker.

LIVINGSTON COUNTY

O. L. Bettag was elected president of the Livingston County Medical Society for the ensuing year and Otis Law, secretary. Both doctors are residents of Pontiac.

McLEAN COUNTY

Howard P. Sloan, Bloomington, has resumed his practice after his return from naval service.

New officers for the McLean County Medical Society are E. M. Stevenson, Bloomington, President and Willis Atkinson, also of Bloomington, Secretary-treasurer.

MADISON COUNTY

Edward Ferguson, home on terminal leave in the navy, has decided to locate in Edwardsville and will be associated with his father, E. C. Ferguson who has practiced medicine half a century in Edwardsville.

William W. Billings, after service in the navy medical corps, has resumed the practice of medicine in Alton.

Luke A. Knese who served as Lt. Col. in the army medical corps has announced resumption of general practice in Madison.

OGLE COUNTY

Walter Bebb, a native of Rockford who has practiced at Polo since 1942, has announced that he is again planning to retire. He had resumed service during the wartime emergency.

PEORIA COUNTY

Harold Vonachen, medical director of Caterpillar Tractor Company, was elected a vice-president of the American Association of Industrial Physicians and Surgeons.

Archibald L. Hoyne of Chicago was guest speaker at the meeting of the Peoria County Medical Society on April 30th.

RANDOLPH COUNTY

Ralph May has been reappointed as one of the examining physicians for the Veterans' Administration at Marion.

Omer Hoffman has returned to his practice in Chester after discharge from the navy medical corps.

ROCK ISLAND COUNTY

A Clinical Conference was held on May 1st in Rock Island by the Rock Island County Medical Society with W. W. Bauer, Harold M. Camp and John W. Neal participating in the program.

F. E. Bollaert, East Moline, has been appointed to serve as city physician. He succeeds J. H. Fowler who has served in the position for 22 years.

Herbert S. Huston, of DeKalb, formerly of Carthage, has been appointed first full-time medical director of the Rock Island County Tuberculosis Sanatorium.

ST. CLAIR COUNTY

George R. Hays, Marissa, was honored with a dinner in celebration of his 50 years of service in the practice of medicine.

Henry H. Hurd, one of the first East St. Louis physicians to enter the armed services, has returned to reestablish his private practice with offices in the Spivey Building.

SANGAMON COUNTY

A. E. Steer, Springfield, has resumed practice following three and one-half years in the U. S. Army Medical Corps.

TAZEWELL COUNTY

Albert J. Brown, recently separated from the army medical corps, has opened offices in Pekin to resume the practice of medicine.

MARRIAGES

William R. Cubbins to Miss Mary O'Connor, both of Chicago, May 8th.

James E. Blades, Sidney, to Miss Mary Alice Wack of Mansfield, New Year's Day.

DEATHS

Joseph Anthony Benedetto, Chicago; Chicago College of Medicine and Surgery, 1913; on the staffs of the Mother Cabrini Memorial and Columbus hospitals. Died January 25, aged 54.

William H. Bishop, Elgin, retired; Bennett College of Eclectic Medicine and Surgery, Chicago, 1877. Practiced medicine in St. Charles, Ill., for 45 years prior to retirement. Served as health officer there for many years. Died in Sherman Hospital April 23rd, aged 91.

Alfred H. Claeboe, Waukegan; University of Illinois College of Medicine, 1911. Member of staff of St. Therese and Victory Memorial Hospitals. Died in St. Therese Hospital, May 15, aged 68.

Anders Frick, Chicago; Karolinan Institute, Stockholm, Sweden, 1896. Former chief of staff of the Augustana Hospital. Died May 9th at the age of 78.

Herman J. Friedman, Rock Island; Chicago College of Medicine & Surgery, 1912. Died January 31, aged 71, of rheumatic heart disease.

Robert Marney Gunn, Gila; Medical College of Indiana, Indianapolis, 1889. Had practiced medicine for 50 years. Died at Philo, April 21st, aged 86.

William Logan Johnson, Thompsonville; Missouri Medical College, St. Louis, 1897. Died in his sleep April 15th, aged 77.

Malcolm A. Kemper, Winnetka; Rush Medical College, 1918. Diplomate of the National Guard. Served during World War I. Died January 29th, aged 56.

James A. Nelson, Chicago; University of Illinois College of Physicians and Surgeons, 1894. For more than 30 years, was a medical examiner for several Courts of the Independent Order of Foresters. Died April 19th, aged 78.

James Fulton Percy, Los Angeles; Bellevue Hospital Medical College, New York, 1886. Devised surgical instruments for cancer treatment; was a founder member of the American College of Surgeons and a past president of the Illinois State Medical Society; was a co-founder of the Galesburg (Ill.) Cottage Hospital. Died April 19th at the age of 82.

Hiram Edgar Pinter, Peoria; The Hahnemann Medical College and Hospital, Chicago, 1895. Had lived in Peoria 42 years. Served in medical corps in

World War I. Died April 24th at the age of 76.

WILLIAM J. SALING, Decatur; University of Louisville School of Medicine, Ky., 1896. Invented a metal splint designed to prevent flat wrist. Died May 10th at the age of 81.

CHARLES G. SMITH, Red Bud; Marion-Sims College of Medicine, St. Louis, Mo., 1892. Had practiced medicine in Red Bud for 48 years. Died in Kensington, Md., April 19th at the age of 77.

CASSIUS DOUGLAS WESCOTT, Chicago, retired: Rush Medical College, 1883. At one time was assistant professor of ophthalmology at Rush, and former president of the American Ophthalmological Society. Suffered a broken hip April 22nd following a fall and died May 6th, aged 84.

CHARLES IRA WYNEKOOP, Chicago; University of Illinois College of Physicians and Surgeons, 1898. Was president and chief surgeon at Lake View Hospital from 1911-39. Attending surgeon at Augustana Hospital. Died in his home, April 19th, aged 74.

NEW DRUG SN 7618 SUPPRESSES MALARIA BUT DOES NOT CURE IT

A two-year study of a new antimalarial drug, *chloroquine, also known as SN 7618*, reveals that it is an effective suppressive agent but does not cure malaria, according to a report released by the Board of Coordination of Malarial Studies.

R. F. Loeb, M.D., of New York, Chairman, *and his associates, writing in the April 20 issue* of *The Journal of the American Medical Association*, say that they found toxic reactions to the drug, which included mild and transient headache, visual disturbances, intense itching *and gastrointestinal complaints, following doses* adequate for treatment of acute attacks.

In studying approximately 5,000 individuals who received SN 7618, the authors write that they found "in a small number of instances, usually with dosages higher than necessary for either treatment or suppression, individual subjects have refused to continue drug administration because of unpleasant symptoms. None of these manifestations has been constitutionally serious and all have been readily reversible. Unlike quinacrine, SN 7618 does not discolor the skin."

Continuing with their comparsion of the two antimalarial drugs the authors say that like *atabrine, SN 7618 does not produce permanent* cures. SN 7618 is absorbed somewhat more rapidly than atabrine, and it is highly active against two of the most widely distributed malarial types — vivax and falciparum. However, *the authors state, "it does not prevent relapses* in vivax malaria even when administered in doses *many times those required to terminate an acute* attack, nor will it prevent the establishment of vivax infection when administered as a prophylactic. It is highly effective in vivax malaria as a suppressive agent and in the termination of *acute attacks, significantly lengthening the interval* between treatment and relapse beyond that observed with quinacrine or quinine. In falciparum malaria it has been demonstrated to suppress the acute attack and to effect complete cure of the infection. Studies of the antimalarial activity of SN 7618 against well standardized strains of P. vivax and P. falciparum have shown its activity to be approximately three times that of quinacrine."

In the majority of patients, treatment with this drug will reduce the temperature to normal within 24 hours and in the remainder within 48 hours.